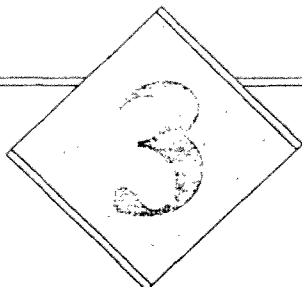


~~Secret NOFORN~~

Chapter 3

93



U-2 Operations in the Soviet Bloc and Middle East, 1956-1968

By January 1956, everyone working on Project AQUATONE could see that the U-2 was nearing the time for operational deployment. During tests the aircraft had met all the criteria established in late 1954. Its range of 2,950 miles was sufficient to overfly continents, its altitude of 72,000 feet was beyond the reach of all known anti-aircraft weapons and interceptor aircraft, and its camera lenses were the finest available.

Because the main targets for the U-2 lay behind the Iron Curtain, Bissell and his staff began looking for operational bases in Europe. The United Kingdom, America's closest ally, seemed the logical choice for U-2 bases, and, on 10 January 1956, Bissell flew to London to discuss the matter with Royal Air Force (RAF) and MI-6 officials. Their initial response was favorable, but they told Bissell that the proposal needed approval at a much higher level.

Bissell reported his findings to DCI Dulles, who promptly arranged to meet with Foreign Secretary Selwyn Lloyd in London to explore the possibility of winning the British Government's approval for the project. Dulles presented his case to Lloyd on 2 February, and, by early March, Prime Minister Anthony Eden approved the basing of U-2s in the United Kingdom. The U-2s were to use Lakenheath AFB, an RAF base also used by the USAF Strategic Air Command (SAC).¹

¹ *OSA History*, chap. 11, pp. 10-15 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

94

THE DEPLOYMENT OF DETACHMENT A TO LAKENHEATH

The first Agency U-2 detachment, consisting of four aircraft and pilots, was known publicly as the 1st Weather Reconnaissance Squadron, Provisional (WRSP-1). The "provisional" designation gave the U-2 detachments greater security because provisional Air Force units did not have to report to higher headquarters. WRSP-1, known within the Agency as Detachment A, began deploying to the United Kingdom on 29 April 1956. By 4 May, all of the detachment's personnel and equipment, including four aircraft, had arrived at Lakenheath.²

Shortly after deployment, on 7 May, the National Advisory Committee on Aeronautics (NACA) released an unclassified U-2 cover story stating that a Lockheed-developed aircraft would be flown by the USAF Air Weather Service to study such high-altitude phenomena as the jet stream, convective clouds, temperature and wind structures at jet-stream levels, and cosmic-ray effects up to 55,000 feet.³

Before overflights could begin from Lakenheath, however, several incidents occurred that dampened Prime Minister Eden's interest in having the U-2s on British territory. In mid-April 1956, a Soviet naval squadron brought Soviet leaders Nikita Khrushchev and Nikolai Bulganin on an official visit to the United Kingdom. Although the ships were docked in Portsmouth Harbor, a British counterintelligence operative and underwater expert, retired Royal Navy Commander Lionel Crabb, apparently undertook a mission to examine the hulls of these vessels but vanished in the process. His headless body was later found washed up on a beach. This so-called Frogman Incident caused an uproar in Parliament and a protest from Moscow that soured relations between the United Kingdom and the Soviet Union. To avoid further deterioration of Anglo-Soviet relations, the Prime Minister wrote to President Eisenhower on 16 May asking that overflights be postponed. Only two days later, a U-2 on a training flight from Lakenheath inadvertently penetrated the British radar network, causing RAF fighters to scramble. Afterward the Air Ministry made a public announcement that a special NACA aircraft was conducting high-altitude research in the United Kingdom. At about the

² Ibid., pp. 17-18 (TS Codeword).

³ Press Release of 7 May 1956 (U) in *OSA History*, chap. 7, annex 60 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

95

same time, Richard Bissell learned that the State Department had told Prime Minister Eden that only one U-2 was based at Lakenheath, when in reality there were four.⁴

THE MOVE TO WIESBADEN

To avoid arousing further reaction in the United Kingdom and to begin the program of U-2 overflights beyond the Iron Curtain without further delay, Bissell moved Detachment A on 11 June 1956 to Wiesbaden, one of the busiest airfields in West Germany, without notifying West German authorities. The detachment commander, Col. Frederick McCoy, was disappointed in his hope that the redeployment of the U-2s could be accomplished without drawing undue attention. The strange-looking planes, with bicycle-type wheels and wings so long they touched the ground after landing, aroused considerable interest. Wiesbaden was to be only a temporary home for Detachment A; the Air Force began preparing Giebelstadt near the East German border for use by the U-2s. Giebelstadt was an old World War II airbase that had been one of the launching sites for the GENETRIX balloons.⁵

Soon after the four U-2s arrived in Wiesbaden, they were refitted with the more powerful J57/P-31 engines. The new engines were better suited for operations behind the Iron Curtain because they were less likely to suffer flameouts than the earlier model. Once the new engines were installed, the aircraft received the designation U-2B.⁶

Bissell was anxious to get the overflights started by late June because SAC weather experts had predicted that the best weather for photographing the Soviet Union would be between 20 June and 10 July. Bissell, however, had not yet received final authorization from President Eisenhower to begin overflights of the Soviet Union. On 28 May 1956, when DCI Allen Dulles met with the President to discuss the U-2's readiness for operations, Eisenhower still made no decision on overflights. Three days later Dulles and Air Force Chief of Staff

⁴ Christopher Andrew, *Her Majesty's Secret Service: The Making of the British Intelligence Community* (New York, 1986), pp. 495-496; Beschloss, *Mayday*, p. 116; *OSA History*, chap. 11, pp. 18-21 (TS Codeword).

⁵ *OSA History*, chap. 11, pp. 21-23 (TS Codeword).

⁶ *Ibid.*, pp. 23, 26 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

96

Nathan Twining prepared a paper for the President outlining "AQUATONE Operational Plans." In the meantime, President Eisenhower had entered Walter Reed Hospital for tests for an abdominal ailment that turned out to be ileitis, requiring an operation. During his recovery from surgery, Eisenhower would make his final decision on the overflight program.⁷

PRESIDENT EISENHOWER'S ATTITUDE TOWARD OVERFLIGHTS

The President had mixed feelings about overflights of the Soviet Union. Aware that they could provide extremely valuable intelligence about Soviet capabilities, he, nevertheless, remained deeply concerned that such flights brought with them the risk of starting a war. From the very beginning of the U-2 program, President Eisenhower had worked to minimize the possibility that overflights could lead to hostilities. He had always insisted that overflights by military aircraft were too provocative, and in 1954 he had therefore supported the Land committee's proposal for an unarmed civilian aircraft instead of the military reconnaissance planes favored by the Air Force. For the same reason, Eisenhower had resisted attempts by the Air Force to take the U-2 program away from the CIA in 1955.

In fact, the President's desire to avoid secret reconnaissance missions over the Soviet Union, with all their risks, led him to make his famous "Open Skies" proposal in the summer of 1955, when the U-2 was still under development but making good progress. At the Geneva summit conference on 21 July 1955, President Eisenhower offered to provide airfields and other facilities in the United States for the Soviet Union to conduct aerial photography of all US military installations if the Soviet Union would provide the United States with similar facilities in Russia. Not surprisingly, Soviet leader Nikita Khrushchev almost immediately rejected Eisenhower's offer. Although the President had hoped that the Soviet Union would accept his proposal, he was prepared for rejection. While Open Skies was still being considered, Eisenhower had stated, "I'll give it one shot. Then if they don't accept it, we'll fly the U-2."⁸

⁷ Ibid., pp. 23-25 and annex 73. "AQUATONE Operational Plans," 31 May 1956 (TS Codeword).

⁸ Quoted in Beschloss, *Mayday*, p. 105.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

97

Even though President Eisenhower had approved every stage of the U-2's development, knowing full well that the aircraft was being built to fly over the Soviet Union, the actual decision to authorize such flights was very difficult for him. He remained concerned that overflights could poison relations with the Soviet Union and might even lead to hostilities. One argument that helped overcome the President's reluctance was the CIA's longstanding contention that U-2 flights might actually go undetected because Soviet radars would not be able to track aircraft at such high altitudes. This belief was based on a 1952 study of Soviet World War II-vintage radars and on 1955 tests using US radars, which—unknown to US officials—were not as effective as Soviet radars against high-altitude targets. Shortly before U-2 operations began, however, the CIA's Office of Scientific Intelligence (OSI) conducted a vulnerability study of the U-2 that was published on 28 May 1956. The study's conclusion was that "Maximum Soviet radar detection ranges against the Project aircraft at elevation in excess of 55,000 feet would vary from 20 to 150 miles. . . . In our opinion, detection can therefore be assumed." The OSI study added, however, "It is doubtful that the Soviets can achieve consistent tracking of the Project vehicle."⁹ Completed just three weeks before the initiation of overflights, this study seems to have had little impact on the thinking of the top project officials. They continued to believe that the Soviets would not be able to track the U-2 and might even fail to detect it, except for possible vague indications.¹⁰

Soviet radars were not President Eisenhower's only concern. Also fearing that a malfunction might cause a U-2 to crash inside the Soviet Union, he asked Allen Dulles what the consequences would be. The President's staff secretary, Col. Andrew J. Goodpaster, who was present at virtually all White House meetings on the U-2 project and served as the President's intermediary to the CIA on this issue, later recalled:

Allen's approach was that we were unlikely to lose one. If we did lose one, the pilot would not survive. . . . We were told—and it was part of our understanding of the situation—that it was almost certain that the plane would disintegrate and that we could

⁹ *OSA History*, chap. 11, p. 31 (TS Codeword). For the belief that the U-2 might go undetected see the Leghorn interview and Dwight D. Eisenhower, *Waging Peace, 1956-1961* (New York, 1965), p. 41.

¹⁰ Richard M. Bissell, Jr., interview by Gregory W. Pedlow, tape recording, Farmington, Connecticut, 28 October 1988 (S).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

98



Colonel Goodpaster with
President Eisenhower

take it as a certainty that no pilot would survive . . . and that although they would know where the plane came from, it would be difficult to prove it in any convincing way."

CIA assurances that the U-2 would probably not be detected, and that a crashed U-2 could not be traced back to the United States, helped overcome the President's worries about overflights. The most important reason why President Eisenhower decided to send reconnaissance aircraft over the Soviet Union, however, was the urgent need for accurate intelligence to confirm or disprove claims of Soviet advances in long-range bombers and missiles. The initial sighting of the new Soviet Bison bomber in the spring of 1954 had been followed by reported sightings of more than 30 of these bombers in the spring and summer of 1955 (in reality these were sightings of the same group of 10 aircraft that circled around out of sight and made several passes during a Soviet air show). Soon members of Congress were calling for investigations into the relative strength of the US and

¹¹ Quoted in Beschloss, *Mayday*, p. 118.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

99

Soviet Air Forces.¹² Early in 1956, concern about a possible Soviet advantage in long-range bombers grew as Air Force Chief of Staff Twining informed the Senate Armed Services Committee that the Soviet Union already had more Bisons than the United States had B-52s and that the Soviets would be able to "maintain this advantage for some time if they keep on the production curve we are now predicting."¹³ By May 1956, reporting on the growing Soviet air strength was no longer confined to aviation journals; *U.S. News and World Report*, for example, featured articles headlined "Can Soviets Take the Air Lead?" and "Is U.S. Really Losing in the Air?"¹⁴

Alongside fear of possible Soviet superiority in long-range bombers came a new potential threat: Soviet progress in guided missile research. Trevor Gardner, Air Force Assistant Secretary for Research and Development, warned in September 1955 that "the most complex and baffling technological mystery today is not the Russian capability in aircraft and nuclear weapons but rather what the Soviet progress has been in the field of guided missiles."¹⁵ On 30 January 1956, *Time* magazine made the guided missile its cover story. The article began by describing a hypothetical crisis set in 1962 in which the United States suffered a humiliating defeat because it had lagged behind the Soviet Union in guided missile development.¹⁶ Just two weeks after this story appeared, the Soviets successfully tested a missile with a range of 900 miles, and President Eisenhower admitted at a press conference that the Soviet Union might be ahead of the United States in some areas of the missile field. Administration critic Senator Stuart Symington then claimed, "The facts are that our missile development may be ahead in the short-range area, but their missile development is ahead in the area that counts by far the most—the

¹² Robert Hotz, "Russian Jet Airpower Gains Fast on US," *Aviation Week*, 23 May 1955, pp. 12-15; "Aviation Week Story Spurs Debate on US, Red Airpower Positions," *Aviation Week*, 30 May 1955, pp. 13-14.

¹³ Claude Witze, "Russians Outpacing US in Air Quality, Twining Warns Congress," *Aviation Week*, 27 February 1956, pp. 26-28; Robert Hotz, "Russian Air Force Now Gaining in Quality," *Aviation Week*, 12 March 1956, p. 286.

¹⁴ "Can Soviets Take the Air Lead? What LeMay, Wilson, Ike Say," *US News and World Report*, 11 May 1956, pp. 108-114; "Is U.S. Really Losing in the Air?" *US News and World Report*, 18 May 1956, pp. 25-27.

¹⁵ William Coughlin, "Gardner Defends Greater R&D Spending," *Aviation Week*, 26 September 1955, p. 14.

¹⁶ "Missiles Away," *Time*, 30 January 1956, pp. 52-55.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

100

long-range area."¹⁷ Fears of Soviet missile progress increased when Nikita Khrushchev stated on 23 April 1956, "I am quite sure that we shall have very soon a guided missile with a hydrogen-bomb warhead which could hit any point in the world."¹⁸

Faced with growing Congressional and public anxiety over Soviet offensive capabilities, President Eisenhower approved the proposed overflight program. Colonel Goodpaster relayed this decision to Bissell, Land, and Killian at a meeting on 21 June. The President nevertheless maintained tight control over the program and authorized only 10 days of overflights when operations over the Soviet Union were ready to start in early July 1956.¹⁹

FIRST OVERFLIGHTS OF EASTERN EUROPE

The CIA initiated U-2 flights over hostile territory even before the President granted final approval for overflights of the Soviet Union. After consulting with the Commander of US Air Force Europe, Richard Bissell used existing Presidential permission for Air Force overflights of the Soviet Union's East European satellites as his authority to plan a mission over Poland and East Germany. Bissell had informed the President of his intention to conduct such missions in the "AQUATONE Operational Plan" submitted on 31 May.

The first operational use of a U-2 took place on Wednesday, 20 June 1956. Carl K. Overstreet flew a U-2 equipped with an A-2 camera over Poland and East Germany. At the end of the mission, Detachment A immediately rushed the exposed film to the United States for processing. The developed film arrived at the Photo-Intelligence Division (PID) on 22 June 1956. PID personnel considered the pictures obtained by mission 2003 to be of good quality.²⁰

¹⁷ Robert Hotz, "Firing of 900-Mile Russian Missile Spurs US Changes," *Aviation Week*, 20 February 1956, p. 27.

¹⁸ "Is Russia Really Ahead in Missile Race?," *US News and World Report*, 4 May 1956, p. 34.

¹⁹ *OSA History*, chap. 11, pp. 27-29 (TS Codeword); A. J. Goodpaster, Memorandum for the Record, 21 June 1956, WHOSS, Alpha, DDEL (TS).

²⁰ *OSA History*, chap. 11, p. 27 (TS Codeword); Mission folder 2003 (20 June 1956), OSA records, job 67-B-328, box 7 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

101

Following the success of this first mission, Bissell was eager to begin overflights of the Soviet Union. But even after the President granted his approval on 21 June, such missions could not yet take place for two reasons. First, President Eisenhower had agreed with a CIA and State Department recommendation that West German Chancellor Konrad Adenauer be informed in advance of US plans to overfly the Soviet Union from bases in Germany (in keeping with existing policies Adenauer was not informed about overflights of Eastern Europe). Second, Soviet party chief Nikita Khrushchev had invited representatives of the US Air Force to the Moscow Air Show, which opened on 23 June 1956. Led by Air Force Chief of Staff Nathan F. Twining, the delegation would be in the Soviet Union for a week, and General Twining requested that no overflights of the Soviet Union be staged until the Air Force delegation had left.²¹

Both of these restrictions on overflights of the Soviet Union were cleared up by the end of June.

A few days later the Air Force delegation returned from Moscow, but now unfavorable weather prevented the start of operations against the Soviet Union.

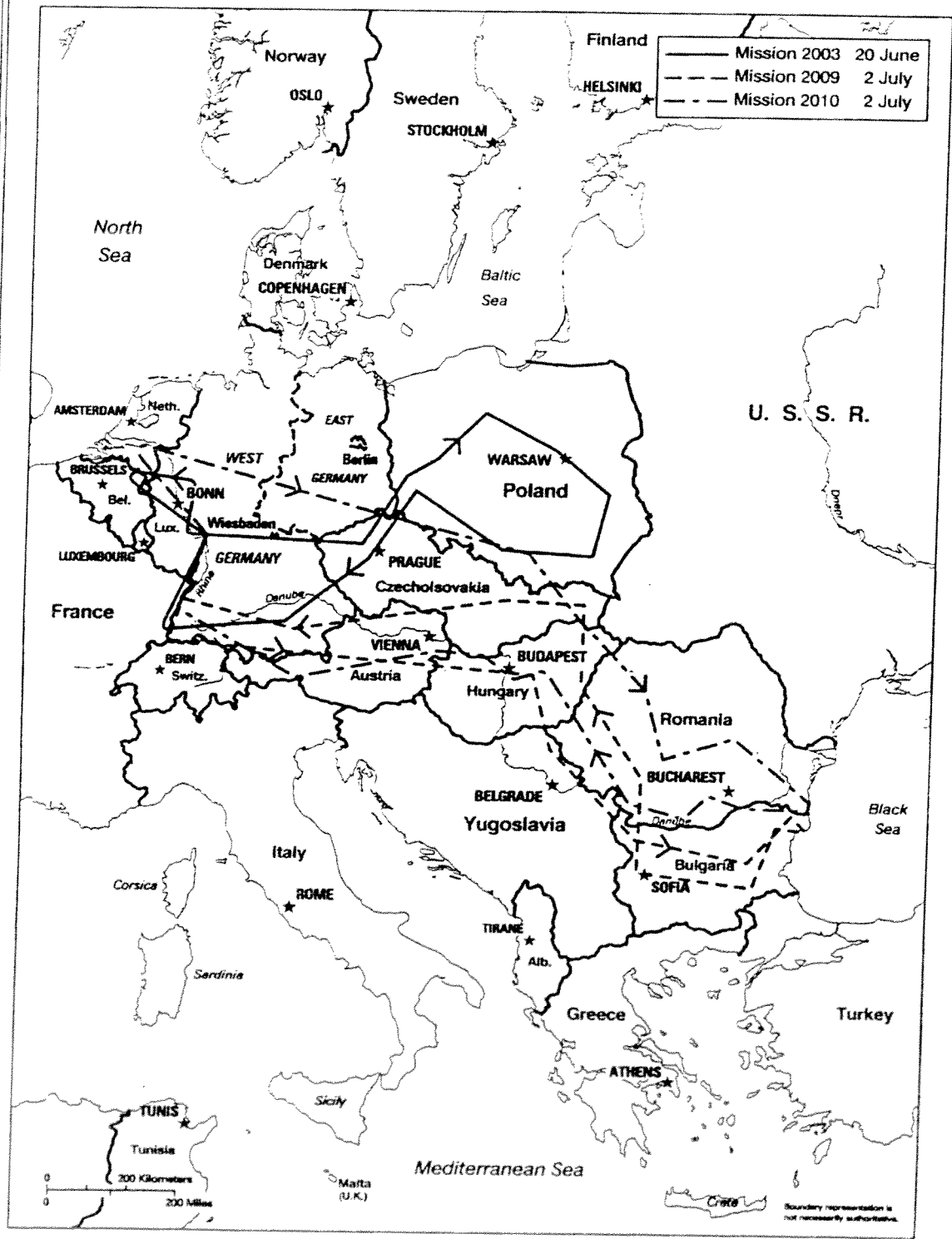
While waiting for the clouds over the Soviet Union to clear, Detachment A carried out two more overflights of Eastern Europe on 2 July 1956: mission 2009 over Czechoslovakia, Hungary, and Bulgaria; and mission 2010 over East Germany, Poland, Hungary, and Romania. That afternoon Bissell and DDCI Cabell gave President Eisenhower a detailed briefing on the first U-2 overflight, which the President found "very interesting, very positive." Eisenhower was anxious to know, however, whether radars had tracked the aircraft. Bissell replied that, although East European radars had picked up the 20 June flight, radar operators had misread the altitude as only 42,000 feet. He added that the Agency was awaiting reports on that morning's flights to see if they, too, had been detected. Noting that the U-2

²¹ Nathan F. Twining, *Neither Liberty nor Safety* (New York: Holt, Rinehart & Winston, 1966), pp. 259-260; *OSA History*, chap. 11, p. 27 (TS Codeword).

²² *OSA History*, chap. 11, p. 28 (TS Codeword).

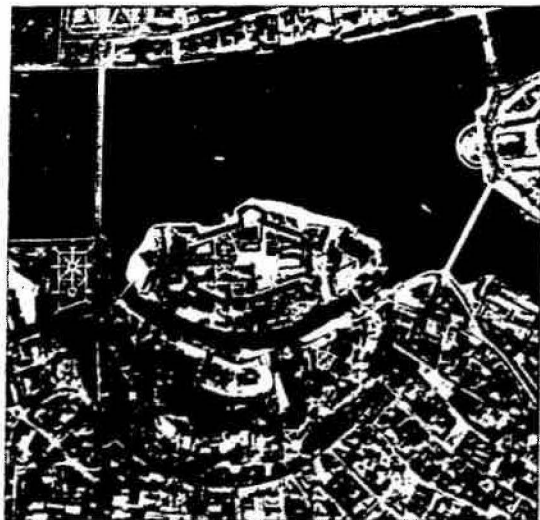
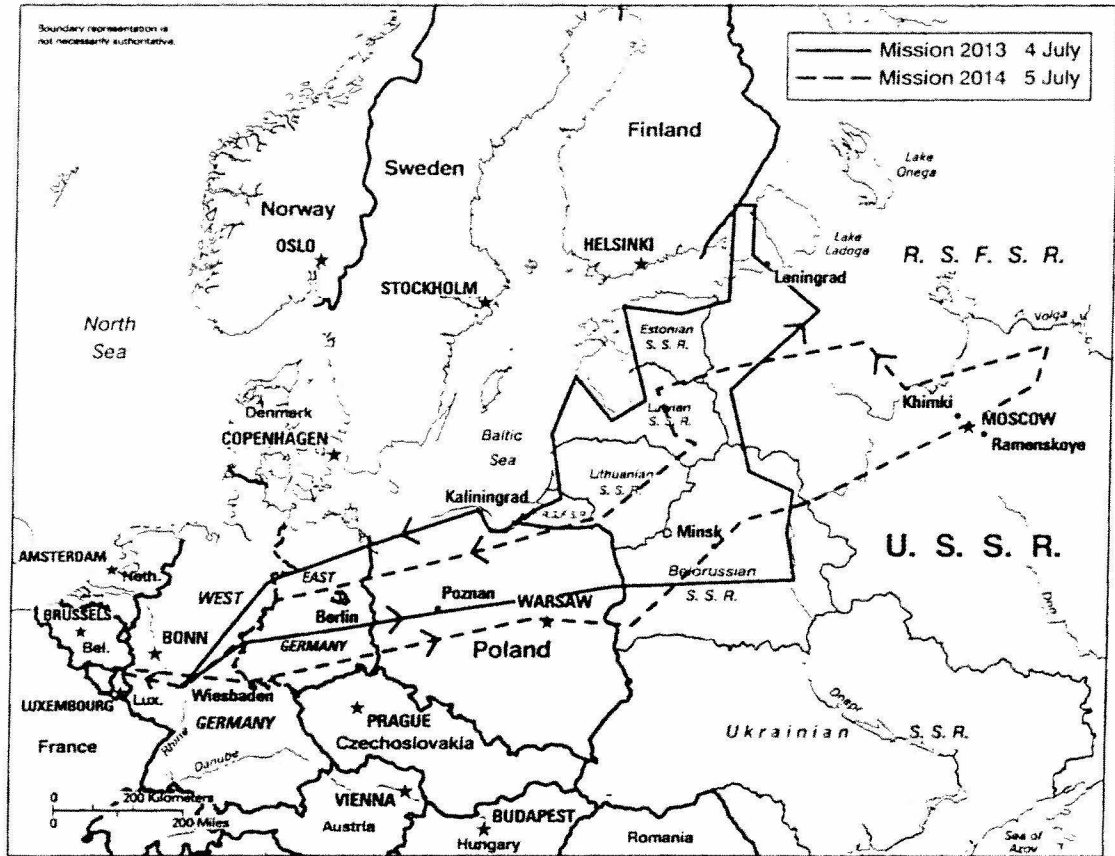
~~Secret~~

First Overflights, 20 June - 5 July 1956



Secret NOFORN

724742 (801373) 4-82



U-2 photography of Leningrad, 4 July 1956



Fili Airframe Plant, Moscow, 5 July 1956

Secret NOFORN

724743 (801374) 4-92

~~Secret NOFORN~~

Chapter 3

104

detachment had four aircraft working and could average up to two flights per day, Bissell told the President that the crews were "ready and eager to go in beyond the satellites" and overfly the center of the Soviet Union.²³

Eisenhower replied that he thought it "urgent" to know whether the recent flights had been tracked by hostile radars. The President was obviously concerned that CIA estimates that the U-2 could fly virtually undetected were proving false. One of the reasons why he had approved the overflight program was the CIA's assurance that the Soviet Union would remain unaware of the flights or—at the very worst—receive only occasional, vague indications.

FIRST U-2 FLIGHTS OVER THE SOVIET UNION

The question of how well the Soviets could track U-2 flights had not yet been settled when the first overflights of the Soviet Union took place. On Wednesday, 4 July 1956, the U-2 known as Article 347 began the first flight over the Soviet Union. Final authorization for mission 2013 had come shortly before takeoff. Late on the evening of 3 July, Bissell went to project headquarters in the Matomic Building to give the "Go" or "No go" decision. Although the President had approved the overflight, the final decision to start a mission depended on a number of factors, especially the weather over the target area and at the takeoff and landing sites. Bissell made the decision just before midnight Washington time, which was six o'clock in the morning in Wiesbaden. This pattern of last-minute approvals continued for the duration of the U-2 overflight program.²⁴

When Wiesbaden received the "Go" signal, a U-2 equipped with an A-2 camera and flown by pilot Hervey Stockman took off on a course that took it over Poznan, Poland, where riots had occurred on 28-30 June. After Poznan, Stockman headed for Belorussia, where he turned north to Leningrad. The last leg of the mission took the U-2 over the Soviet Baltic states before returning to Wiesbaden. The main target of this mission was the naval shipyards in Leningrad, center of

²³ Andrew J. Goodpaster's handwritten notes on 2 July 1956 meeting, WHOSS, Alpha, DDEL (TS).

²⁴ Bissell interview by Welzenbach (S); Cunningham interview (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

105

the Soviet Union's submarine construction program. Mission 2013's route also overflew a number of major military airfields to make an inventory of the new Bison jet-engine heavy bomber.²⁵

The second overflight, on the following day, continued the search for Bison bombers. Pilot Carmine Vito's route was similar but somewhat to the south of Stockman's and also flew farther east, more than 200 kilometers past Moscow. Although the Soviet capital was almost completely hidden by clouds, the A-2 camera with haze filters took some usable photographs of the city. These turned out to be the only U-2 photographs of Moscow because no other mission was sent over the Soviet capital. Among the key targets photographed during mission 2014 were the Fili airframe plant, where the Bison was being built; the bomber arsenal at Ramenskoye, where the Bisons were tested; the Kaliningrad missile plant; and the Khimki rocket-engine plant.²⁶

When Allen Dulles returned to work on Thursday, 5 July 1956, he asked Bissell if any overflights had taken place during the Independence Day holiday. One had been made on the fourth and another just that morning, Bissell replied. (Because of the six-hour time difference, the 5 July flight was safely back in Wiesbaden by the time Dulles spoke to Bissell.) When Dulles asked the routes of these missions, Bissell told him that they had overflown both Moscow and Leningrad. "Oh my Lord," Dulles exclaimed, "do you think that was wise the first time?" "Allen," Bissell replied, "the first is the safest."²⁷

President Eisenhower also wanted to know the results of the 4 and 5 July flights, but his principal concern was whether there had been any indication that either flight had been discovered or tracked by radar. Eisenhower told Colonel Goodpaster "to advise Mr. Allen

²⁵ [redacted] *National Photographic Interpretation Center: The Years of Project HTAUTOMAT, 1956-1958*, Directorate of Science and Technology Historical Series NPIC-3, December 1974, 6 vols. (hereafter cited as *NPIC History*), vol. 1, p. 20 (S); Mission folder 2013 (4 July 1956), OSA records, job 67-B-328, box 7 (TS Codeword). Note on mission numbers: each proposed mission received a number, but not all of these missions were flown.

²⁶ *NPIC History*, vol. 1, p. 21 (S); Mission folder 2014 (5 July 1956), OSA records, job 67-B-328, box 7 (TS Codeword).

²⁷ Bissell interview by Welzenbach (S).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

106

Dulles that if we obtain any information or warning that any of the flights has been discovered or tracked, the operation should be suspended." Goodpaster called both Dulles and Bissell and was told that reports on tracking or attempted interception of the U-2s would not be available for another 36 hours. Later that day the two CIA officials met with Goodpaster to ask if flights could continue in the meantime. Goodpaster replied that his understanding of the President's directive was that the operation should continue "at the maximum rate until the first evidence of tracking was received."²⁸

Although President Eisenhower had originally spoken of suspending the overflights if they were "discovered or tracked," his main concern was to learn if the Soviets could track U-2 missions, meaning that they could follow the flight on their radar screens for most or all of the missions and thus have numerous opportunities to attempt interception. Certainly the President hoped that U-2 flights could not even be detected, but reports received on the 20 June overflight of Eastern Europe had already indicated that this goal was unrealistic. The President's emphasis therefore shifted to tracking. If the Soviets could successfully track U-2 missions, he wanted the overflights halted.²⁹ Reports on Soviet radar coverage of the first two overflights of the Soviet Union became available on 6 July. These reports showed that, although the Soviets did detect the aircraft and made several very unsuccessful attempts at interception, they could not track U-2s consistently. Interestingly, the Soviet radar coverage was weakest around the most important targets, Moscow and Leningrad, and the Soviets did not realize that U-2s had overflown these two cities.³⁰

Detachment A carried out three more overflights of the Soviet Union during the 10-day period authorized by the President. Two of the missions (2020 and 2021) took place on a single day, 9 July 1956. They covered much of Eastern Europe, and the Ukraine and Belorussia in the Soviet Union. Unfortunately, a broken camera

²⁸ Andrew J. Goodpaster, Memorandum for the Record, 5 July 1956, WHOSS, Alpha, DDEL (TS).

²⁹ Gen. Andrew J. Goodpaster, interview by Donald E. Wetzenbach and Gregory W. Pedlow, Washington, DC, 8 July 1987 (S).

³⁰ Mission folders 2013 (4 July 1956) and 2014 (5 July 1956), OSA records, job 67-B-328, box 7 (TS Codeword).

~~Secret~~



~~Secret NOFORN~~

Chapter 3

108

shutter ruined much of the photography of one of the flights. The third mission (2023), on the following day, included the Crimean Peninsula.³¹

The film from the first overflight (4 July) was flown to the United States immediately after the U-2 landed at Wiesbaden. Several members of the Photo Intelligence Division were on hand when the film was developed to check on the results. Also present was James Baker, who had accepted an offer by project officials to get a first-hand look at how the new A-2 lenses were working.³²

The photos from July overflights were generally good, despite occasional problems caused by cloud cover. The huge amount of film taken by these missions provided more information about the Soviet Union's ability to track and intercept U-2s. Photointerpreters examining the films eventually discovered the tiny images of MiG-15s and MiG-17s beneath the U-2s in various pursuit and attack attitudes: climbing, flipping over, and falling toward Earth. It was even possible to determine their approximate altitudes. These photographs showed that the Soviet air defense system was able to track U-2s well enough to attempt interception, but they also provided proof that the fighter aircraft available to the Soviet Union in 1956 could not bring down a U-2 at operational altitude.³³

One problem with early U-2 photography became apparent only after the first films were developed. If there was surface water on the runway at Wiesbaden when the U-2 took off, the camera windows became begrimed. Although the water dried during the flight, the oily scum it left behind degraded the photographic image. To combat this problem, AQUATONE ground crews took brooms and spent several hours before takeoff sweeping puddles of water from the runway to be used by the U-2. Kelly Johnson eventually designed a jettisonable cover for the camera windows, which was released at the same time as the pogos so that it could be recovered and reused.³⁴

³¹ Mission folders 2020 (9 July 1956), 2021 (9 July 1956), and 2023 (10 July 1956), OSA records, job 67-B-328, box 7 (TS Codeword).

³² Cunningham interview (TS Codeword).

³³ Lundahl and Brugioni interview (TS Codeword).

³⁴ Baker interview (S).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

109

SOVIET PROTEST NOTE

The 4 and 5 July overflights brought a strong protest from the Soviet Union on 10 July in the form of a note handed to the US Embassy in Moscow. The note said that the overflights had been made by a "twin-engine medium bomber of the United States Air Force" and gave details of the routes flown by the first two missions. The note did not mention Moscow or Leningrad, however, because the Soviets had not been able to track these portions of the overflights. The Soviet note stated that the flights could only be evaluated as "intentional and conducted for the purposes of intelligence." As soon as the note arrived at the White House on the evening of 10 July 1956, Colonel Goodpaster called Bissell and told him to stop all U-2 overflights until further notice. The next morning Goodpaster met with Bissell to review the U-2 situation. Bissell said three additional flights had taken place since the missions mentioned in the Soviet note but added that no more were planned.³⁵

Later Eisenhower told Goodpaster that he "didn't like a thing" about the Soviet note and was going to discuss the matter with Secretary of State Dulles. With the strong approval of President Eisenhower, Goodpaster informed DCI Dulles that "there is to be no mention of the existence of this project or of operations incident to it, outside the Executive Branch, and no mention within the Executive Branch to others than those who directly need to know of the operation, as distinguished from output deriving from it."³⁶

During these initial overflights, the U-2 flew above 69,000 feet and could be seen only fleetingly by pilots of the Soviet interceptor aircraft. Thus, it appears that the Soviet claim that the intruder was a twin-engine bomber was probably based on the assumption that this was another overflight by a reconnaissance version of the twin-engine Canberra bomber, similar to the RAF overflight of Kapustin Yar in 1953. The US reply, sent to the Soviets on 19 July, truthfully denied that any US "military planes" had overflown the Soviet Union on the days in question. Meanwhile, on 16 July the Polish Ambassador to

³⁵ "Alleged Violations of Soviet Territory: Soviet Note of July 10, 1956 with U.S. Reply," *US Department of State Bulletin*, 30 July 1956, pp. 191-192; Andrew J. Goodpaster, Memorandum for the Record, 11 July 1956, WHOSS, Alpha, DDEL (TS).

³⁶ Andrew J. Goodpaster, Memorandum for the Record, 11 July 1956, WHOSS, Alpha, DDEL (TS).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

110

the United States delivered an oral protest concerning overflights of Poland on 20 June and 2 July. This was followed by a protest note from the Czechoslovak Government on 21 July. No formal reply was sent to the two Soviet satellite states.³⁷

The details of the flightpaths listed in the Soviet and Polish protests, along with the subsequent photographic evidence of Soviet interception attempts, made it clear that U-2s could not fly undetected over the Soviet Union or Eastern Europe and could even be tracked for extended periods of time. This news greatly disturbed President Eisenhower. In a meeting with Allen Dulles on 19 July 1956, the President recalled how he had been told that "not over a very minor percentage of these (flights) would be picked up." He went on to question "how far this should now be pushed, knowing that detection is not likely to be avoided." After discussing the possibility of basing U-2s in the Far East, President Eisenhower went on to say that he had "lost enthusiasm" for the U-2 activity. He noted that, if the United States were on the receiving end of a Soviet overflight operation, "the reaction would be drastic." The President was also concerned that the American public might learn of the overflights and be shocked that their country had violated international law. He stated, "Soviet protests were one thing, any loss of confidence by our own people would be quite another."³⁸

The President's rapid disenchantment with the project was not lost on Richard Bissell. Fearing for the U-2 program's survival, he met with the Land committee in early August 1956 to urge them to help make the U-2 less vulnerable to radar pulses. His goal was to reduce the aircraft's radar cross section so that it would be less susceptible to detection. Edward Purcell had some ideas on this and suggested that he supervise a new project in the Boston area to explore them. At the direction of the Land committee, Bissell set in motion a project known as HTNAMABLE to establish a proprietary firm called the Scientific Engineering Institute (SEI) in Cambridge. Former Air Force Col. Richard S. Leghorn headed the SEI operation for the Agency when it began on 26 November 1956. SEI was staffed by several MIT scholars who conducted studies and experiments into

³⁷ "Alleged Violations of Soviet Territory: Soviet Note of July 10, 1956 with U.S. Reply," *US Department of State Bulletin*, 30 July 1956, pp. 191-192; *OSA History*, chap. 11, pp. 32-33 (TS Codeword).

³⁸ Andrew J. Goodpaster, Memorandum for the Record, 19 July 1956, WHOSS, Alpha, DDEL (TS).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

111

radar-absorbing materials and techniques proposed by Purcell. The effort, known as Project RAINBOW, got under way by the end of the year.³⁹

THE END OF THE BOMBER GAP

During the three-week period of 20 June to 10 July 1956, U-2s had made eight overflights beyond the Iron Curtain, including five over the Soviet Union. PID's photointerpreters were busy until the end of August with their initial evaluation of the photography obtained by these flights. Their efforts were complicated by the division's move on 9 July from Que Building to the Steuart Building, but, when the photointerpreters were finished, they were able to write "finis" to the controversy over Soviet bomber strength.

Although the Air Force had claimed that the Soviet Union possessed almost 100 of the new Myasishchev-4 (Bison) heavy bombers, U-2 photography proved this assertion wrong. There were no Bison bombers at any of the nine long-range bomber bases photographed by the July missions. DCI Allen Dulles was particularly impressed by the photographs of the Soviet bomber bases, which in later years he called "million-dollar" photography. The actual value of the U-2 photos was probably even greater because, on the strength of their evidence, the White House was able to deny Air Force requests for additional B-52 bombers to "catch up" to the Soviets.⁴⁰

Because of the need to protect the source of the information about Soviet bomber strength, the controversy surrounding this issue did not immediately die down. In November 1956, when the CIA began providing new Bison production figures based on U-2 photography without identifying the source, some members of Congress—unaware of the existence of the U-2—questioned the motivation behind the reduced estimates. They suggested that either the earlier estimates of Soviet bomber strength had been inflated to increase Air Force appropriations or the new estimates had been reduced by White House direction in order to hold down military expenditures.

³⁹ Records of Scientific Engineering Institute (Project HTNAMABLE). OSA records (TS Codeword).

⁴⁰ *NPIC History*, vol. 1, p. 23 (S)

~~Secret~~

~~Secret NOFORN~~

Chapter 3

112

No one in the White House, the CIA, or the Air Force could reveal that U-2 photographs had actually provided the primary evidence for this change in the estimates.⁴¹

The need to keep the existence of the U-2 program secret caused problems even within the CIA itself. The Office of Security sharply restricted the number of persons who could be cleared for access to U-2 photography. The special clearance was granted on a "slot" basis, and only the person assigned to a particular position or "slot" could have the clearance. The U-2 photographs were kept in a secure room, and only those with special clearances were admitted to the room. In addition, the Office of Security considered U-2 information too sensitive to use in CIA publications. As a result, many analysts did not have access to information that would have greatly aided the production of intelligence estimates.⁴²

TACTICAL INTELLIGENCE FROM U-2s DURING THE SUEZ CRISIS

Although U-2s had ceased flying over the Soviet Bloc because of President Eisenhower's standdown order, they could still be used elsewhere in the world. The Middle East would be the next area for U-2 operations. On 26 July 1956, Egyptian President Gamal Abdel Nasser nationalized the Suez Canal Company in retaliation for the decision by the United States and the United Kingdom to withdraw financial support for the Aswan Dam project. Nasser's action provoked an international crisis that would have a permanent effect on the U-2 program.

Long before the Suez Crisis developed, the CIA had planned to deploy U-2s in Turkey for use in the Soviet overflight program. On 1 May 1956, US Charge d'Affaires Foy D. Kohler approached Turkish Prime Minister Adnan Menderes on this matter. He told the Prime Minister that the effort was a continuation of the GENETRIX program, during which balloons had been released from Turkey, and involved aircraft that could fly 10,000 feet higher than any Soviet plane. Menderes gave his approval immediately. At the time of the

⁴¹ John Prados, *The Soviet Estimate: U.S. Intelligence Analysis and Russian Military Strength* (New York: Dial Press, 1982), pp. 45-47.

⁴² Lundahl and Brugioni interview (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

113



Suez takeover, however, the second contingent of U-2 aircraft and pilots was still being trained in Nevada. This unit would not be ready for redeployment before the end of August and would not become established at Incirlik airbase near Adana, Turkey, until early September 1956. The Agency referred to the AQUATONE detachment at Adana as Detachment B, cryptonym KWCORK; the Air Force covername was Weather Reconnaissance Squadron Provisional 2; and the unit's unofficial name was Tuslog Detachment 10-10. By whatever name, the Adana detachment became the mainstay of U-2 activity for the next three and a half years.⁴³

The fast-moving events of the Suez Crisis would not wait for Detachment B pilots to complete their training. With tension growing between Egypt and the Suez Canal Company's former owners, the United Kingdom and France, as well as between Egypt and Israel, US

⁴³ *OSA History*, chap. 11, pp. 9, 39-40; chap. 12, pp. 5, 12 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

114

military and foreign policy planners needed immediate information about developments in the eastern Mediterranean. Detachment A was, therefore, assigned the first Middle East overflights. On 29 August, U-2 missions 1104 and 1105 left Wiesbaden and overfly the eastern Mediterranean littoral, starting with Greece, then Egypt, Israel, Lebanon, Syria, and Turkey. Because these target areas were beyond the round trip range of the Wiesbaden-based U-2s, the planes landed at Adana for refueling. The next day, the same two planes, with different pilots, took off from Adana and overfly the same Middle East territory, this time including the Gaza Strip, before returning to Wiesbaden. The film contained evidence of large numbers of British troops on Malta and Cyprus and [REDACTED]

As the situation around Suez grew more tense, the Eisenhower administration decided to release some of the U-2 photos to the British Government. On 7 September, James Reber, chairman of the Ad Hoc Requirements Committee, and Arthur Lundahl, chief of the Photo Intelligence Division, flew to London, taking with them photos of the eastern Mediterranean area, including the Suez Canal, taken on 30 August. These were the first and the only photos of the Middle East that the President authorized to be given to the British during the 1956 crisis.⁴⁵

The Eisenhower administration viewed the developments in the eastern Mediterranean with great concern. To keep the President and Secretary of State abreast of developments in the area, Deputy Director for Intelligence Robert Amory established on 12 September a multiagency group known as the PARAMOUNT Committee to monitor the situation on a round-the-clock basis. The PARAMOUNT Committee worked inside PID headquarters in the Steuart Building. Composed of members from CIA, State, NSA, Army, Navy, and Air Force, this committee met daily—frequently several times a day—to produce reports based on information obtained from U-2 photography, communications and electronic intelligence, and agents. The photointerpreters working for the PARAMOUNT committee also came from several agencies: the CIA, the Army, and the Navy.⁴⁶

⁴⁵ Mission folders 1104 (29 August 1956) and 1105 (29 August 1956), OSA records, job 67-B-972, box 6 (TS Codeword).

⁴⁶ Lundahl and Brugioni interview (TS Codeword); *NPIC History*, vol. 1, pp. 56-58 (S).

⁴⁷ *NPIC History*, vol. 1, pp. 47-49, 54-56 (S).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

115

The Suez Crisis was a major turning point in the use of the U-2 airplane. Before this crisis, the U-2 had been seen solely as a collector of strategic intelligence, with high-quality results considered more important than speed. U-2 film had, therefore, been returned to the manufacturer for optimum development and then interpreted in Washington using the most up-to-date devices. Now, because of the Middle East crisis, Project AQUATONE was expected to perform like a tactical reconnaissance unit, developing film immediately after landing for instant interpretation or "readout." Photo-Intelligence Division personnel assigned to Project HTAUTOMAT (U-2 film exploitation), therefore, had to arrange for forward processing of the U-2 film to avoid unacceptable delays in providing intelligence on tactical developments around Suez.

PID acted quickly to carry out its new assignment. Lundahl and Reber flew from the United Kingdom to US Air Force Europe headquarters in Wiesbaden on 12 September to make arrangements for processing and interpreting U-2 film in West Germany. They had been preceded by [redacted] chief of PID's Special Projects Branch. Following detailed discussions with Air Force photo-intelligence personnel, the CIA representatives arranged to use a portion of a nearby Air Force photo laboratory for developing U-2 film. With the assistance of [redacted] chief of the HTAUTOMAT photo laboratory, and Air Force personnel, [redacted] had the lab ready for processing on the following day, when the next U-2 mission returned from the Middle East. After quickly developing the film, [redacted] and his joint staff of CIA and armed forces personnel studied it for indications of British and French preparations for hostilities and sent their first report to Washington on 15 September.

Although the Air Force provided considerable assistance in establishing [redacted] photo laboratory, Air Force officials did not like the idea of CIA personnel controlling overseas photo processing and interpretation centers, which were normally under Air Force control. Further negotiations led to a CIA-Air Force agreement at the end of October, under which the Air Force would name the commanding officer for such installations and the CIA would designate the deputy, who was responsible for technical and intelligence matters.⁴⁷

PID soon added two photointerpreters and a lab technician to the West German operation, which continued to develop and interpret U-2 photography of the Middle East throughout September and

⁴⁷ Ibid., pp. 49-52 (S).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

116

October 1956. This unit's timely and accurate information enabled the PARAMOUNT Committee to predict the joint Israeli-British-French attack on Egypt three days before it took place.

[REDACTED]

[REDACTED] During the rest of the month, Detachment A pilots flew another eight missions over the Middle East. By this time, the new Detachment B in Turkey was ready for operations, and it was better positioned to provide coverage of the Middle East. Detachment B began flying missions in September and soon became the primary detachment for Middle East overflights, conducting nine out of the 10 such missions flown in October.⁴⁸

Detachment B's first U-2 flight, on 11 September 1956, made passes over [REDACTED]. The next flight, more than two weeks later, covered much the same ground but flew as far west as [REDACTED]. Both were "special" missions aimed at

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Other U-2 photographs revealed the presence

⁴⁸ *OSA History*, chap. 19, annex 120, "CIA U-2 Missions Flown, 1956-1968," pp. 1-2 (TS Codeword).

⁴⁹ Lundahl and Brugioni interview (TS Codeword).

⁵⁰ Dwight D. Eisenhower Diary, 15 October 1956, DDEL.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

117

The Anglo-French military buildup greatly irritated President Eisenhower, who considered these activities a violation of the 1950 Tripartite Declaration, in which the United States, the United Kingdom, and France had agreed to maintain the status quo in armaments and borders in the Middle East.

U-2 photography continued to keep the President and other key officials well informed about the progress of the crisis.

Secretary of State John Foster Dulles told the President on 28 October that he believed an Israeli attack on Jordan was imminent, adding that he thought the British and French would take advantage of such an attack to occupy the Suez Canal.⁵²

The 10-day Middle East war began on the afternoon of 29 October 1956 with Israeli paratroop drops in the Sinai peninsula, followed by mobile columns striking deep into Egyptian territory. The next day, 30 October, Francis Gary Powers conducted mission 1314, where he photographed black puffs of smoke from the fighting between Israel and Egypt. Adana-based U-2s were in the air for the next two days filming the Suez Canal area.

The United Kingdom and France entered the fray on the evening of 31 October with bombing raids against major Egyptian airfields. The Anglo-French bombing campaign continued for the next 48 hours. Early on the morning of 1 November, an Adana-based U-2, piloted by William Hall, took off to gather intelligence on the Hall where he made several passes to obtain complete coverage of the Israeli-Egyptian fighting there. He then headed west to Cairo, passing directly over the main Egyptian airbase

⁵¹ Lundahl and Brugioni interview (TS Codeword).

⁵² Telephone calls, 28 October 1956. DDE Diary, DDEL.

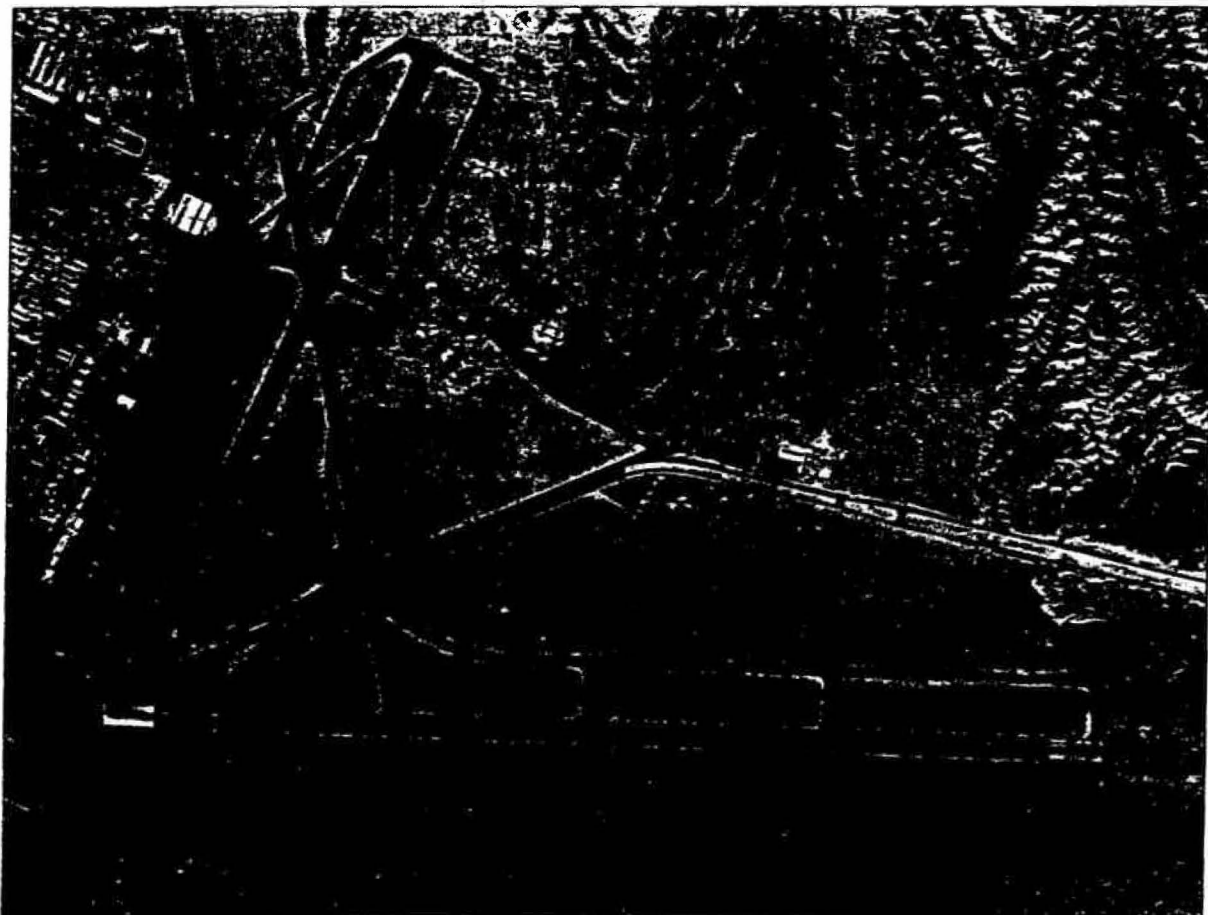
⁵³ pp. 308-309; Mission folder 1314 (30 October 1956). OSA records, job 67-B-972, box 1 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

119



at Almaza, where he filmed neatly arranged rows of Egyptian military aircraft. Continuing past Cairo to film another airfield, [Hall] turned southeast and then north to fly along the Nile, again crossing directly over Almaza. The photography from this leg of the mission revealed the burning wreckage of the Egyptian aircraft. During the short period of time that had passed between [Hall's two] passes, a combined Anglo-French air armada had attacked the airbase. When shown the before and after photos of Almaza, President Eisenhower told Arthur Lundahl: "Ten-minute reconnaissance, now that's a goal to shoot for!"³⁴ Eisenhower was pleased with the aerial photography but

*U-2 photography of Egyptian
airbase at Almaza,
29 October 1956*

³⁴ Lundahl and Brugioni interview (TS Codeword); Beschloss (*Mayday*, p. 138) mistakenly identifies this quote as coming from the British, but they did not receive copies of these photos.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

120

angered by what it depicted: an Anglo-French attack on Egypt. He quickly called for a cease-fire and denied the United Kingdom any further U-2 photographs of the Middle East.⁵⁵

The 1 November mission over Cyprus and Egypt also photographed Anglo-French preparations to invade Egypt. President Eisenhower was informed of this impending invasion on Sunday, 4 November. On the following day, British and French paratroopers dropped near Port Said at the north end of the Suez Canal. This action prompted Soviet Premier Nikolai Bulganin to send messages to France, Britain, and Israel warning that the Soviet Union was ready to use force to crush the aggressors.⁵⁵

Early on the morning of election day, 6 November, the Anglo-French invasion armada arrived at Port Said and began landing troops. Back in Washington President Eisenhower met with Allen Dulles to discuss the deepening international crisis. Worried that the Soviet Union might be poised to intervene in the war, the President ordered Dulles to have the Adana-based U-2s fly over Syria to see whether the Soviets were moving planes to Syrian airbases in preparation for a strike against the forces attacking Egypt. The answer to Eisenhower's question came much sooner than expected because on the previous day a U-2 had already overflown Syria before making a run across northern Egypt. The film from this flight had reached Wiesbaden for processing and readout during the night. The results were in the hands of the PARAMOUNT Committee by midmorning on 6 November, while the President was motoring to Gettysburg to cast his ballot. By the time the President returned to the White House by helicopter at noon, Colonel Goodpaster was waiting for him with an answer: there were no Soviet aircraft in Syria. Because of the President's concern about possible Soviet moves, Syria was the target of 14 additional U-2 flights between 7 November and 18 December 1956.⁵⁶

The increasing reliance on Adana-based U-2s for coverage of the Middle East during the Suez Crisis made it difficult for the photointerpreters to supply timely information. When Detachment B aircraft returned to their base at Adana, there were no film-processing

⁵⁵ Donald Neff, *Warriors at Suez: Eisenhower Takes America into the Middle East* (New York: Simon and Schuster, 1981), p. 403.

⁵⁶ Memorandum of Conference, 6 November 1956, Eisenhower Diary, Whitman File, DDEL (U); *OSA History*, chap. 19, annex 120, p. 3 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

121

facilities available, and the film had to be flown to Wiesbaden, adding a 10- to 15-hour delay. During the gradual buildup of the crisis, this delay had been tolerated, but, once actual hostilities broke out, US decisionmakers needed a more rapid response. On 29 October, Richard Bissell ordered Lundahl to establish a film-processing facility at Adana. Two PID employees went to Adana on 13 November to set up the facility, and two photointerpreters moved from Wiesbaden to Adana to help in the effort. Forward processing was, however, hampered by the location of the Adana facility on a flat, arid plain in southern Turkey, 35 miles from the Mediterranean at the very end of a long supply line.

The PID team obtained and outfitted a trailer for film processing, but many problems had to be overcome. The first major problem was obtaining enough clean water. Detachment B personnel, therefore, purchased large amounts of borax locally for use in purifying water. In fact, they bought so much borax on the local market that one of them was arrested by the Turkish police, who believed he was using the chemical to make drugs. It was also difficult to obtain a constant source of developers and fixers for processing the U-2 film, since the large Air Force supply facility at Wheelus AFB in Libya refused to provide the needed photographic chemicals. When PID personnel accompanied processed film from Turkey to the United States, they returned to Turkey sitting atop cartons of chemicals for the next day's processing. At first, film was developed in improvised tanks using flimsy wooden spools and hand-turned cranks to move the film through the solutions. Later, the Adana facility moved from its trailer to a building and received more up-to-date processing equipment. As was the case with the photo lab in Germany, the Adana lab's personnel came from the Agency and the armed forces.⁵⁷

The need to produce very timely intelligence diminished after the British and French agreed to a cease-fire on 7 November 1956. By the end of the month, foreign troops began evacuating Egyptian territory, and the pressure on the Adana photointerpretation unit eased. The facility remained in existence, however, and was used twice in December 1956 and 11 times in the first half of 1957. It was then placed in caretaker status, for emergency use only.

⁵⁷ *NPIC History*, vol. 1, pp. 53-54 (S); Lundahl and Brugioni interview (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

122

RENEWED OVERFLIGHTS OF THE SOVIET UNION

Throughout the fall of 1956, U-2s provided valuable coverage of the Middle East crisis, but they were not conducting their original mission of strategic reconnaissance of the Soviet Union. President Eisenhower had halted all such overflights by his order of 10 July, and, in the months that followed, he remained unconvinced by CIA arguments in favor of a resumption of overflights. On 17 September 1956, DDCI Cabell and Richard Bissell went to the White House to ask President Eisenhower to authorize more flights over the Soviet Union. Adm. Arthur W. Radford, Chairman of the Joint Chiefs of Staff, also attended the meeting. Bissell and Defense Department representatives reviewed the valuable intelligence from the July U-2 flights, and Bissell then informed Eisenhower that many important intelligence requirements remained unfilled. To fill these requirements, Bissell noted, would require photography of approximately 15 separate areas of the Soviet Union. Pleading for the authority to resume overflights, Bissell stressed that conditions for photography were becoming less favorable as the days grew shorter. While the U-2 was then still safe from interception, he added, it might not be in the future.³⁸

President Eisenhower acknowledged the value of the U-2 but emphasized that the international political aspects of overflights remained his overriding concern. He said he would talk further with John Foster Dulles about the matter, noting that the Secretary of State had at first seemed to belittle the political risk but had later found it increasingly worrisome.

A little more than two weeks later, on 3 October, when the President again met with Bissell, Cabell, and Radford, John Foster Dulles was also present. In opening the meeting, Eisenhower said he had become discouraged regarding Project AQUATONE. Although he had been assured that "there would be a good chance of not being discovered on most, if not all, operations, just the opposite had proved true." The President observed that arguments in favor of resuming U-2 operations did not take world opinion into consideration. He added that great efforts had been made for many years "to create an opinion in the world that we are not truculent and do not want war," and, if knowledge of the U-2 overflights got out, world opinion would view them as "provocative and unjustified."³⁹

³⁸ Andrew J. Goodpaster, Memorandum of Conference, 17 September 1956, WHOSS, Alpha, DDEL (TS).

³⁹ Andrew J. Goodpaster, Memorandum for the Record, 3 October 1956, WHOSS, Alpha, DDEL (TS).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

123

Secretary of State Dulles said that, although he essentially agreed with the President's comments, he thought that "really important results" might be obtained by a seven to 10-day operation. He, nevertheless, questioned the long-term value of the results. DDCI Cabell replied that U-2 photographs would be useful much longer than the Secretary of State had implied because they would establish a reference bank of geographic and manmade features. Siding with Cabell, Admiral Radford pointed out the need for more intelligence to make estimates better.

President Eisenhower was not convinced by these arguments. Although willing to consider extensions of the radar-seeking ferret flights he had authorized along the Soviet borders, he remained opposed to penetration flights over the Soviet Union.

Events in Eastern Europe in the fall of 1956 helped to change the President's mind. In October the Soviet Union backed away from a confrontation with nationalist Communist leaders in Poland only to find itself facing a similar situation in Hungary, where mass demonstrations led to the formation of a new government under Imre Nagy on 23 October 1956. Soviet troops and tanks temporarily withdrew from Budapest while awaiting reinforcements. By early November, however, the Kremlin leadership decided that events in Hungary were getting out of hand—particularly when Premier Nagy announced his nation's withdrawal from the Warsaw Pact—and ordered Soviet troops to suppress the Hungarian uprising. Although President Eisenhower deplored the Soviet intervention, he turned down CIA requests for permission to airdrop arms and supplies to the Hungarian rebels. In fact, the President forbid all overflights of that nation, including those by U-2 aircraft, and none was made.⁶⁰

Although President Eisenhower had not been willing to allow overflights during the Hungarian crisis, the Soviet Union's actions in Hungary convinced him to authorize renewed overflights of the Soviet Bloc, a decision that was made easier by his reelection by a large margin in early November. Initially, however, the President only authorized overflights of Eastern Europe and Soviet border regions, not the deep penetration overflights that had been requested by CIA. At a 15 November 1956 meeting with Acting Secretary of State Herbert Hoover, Jr. (John Foster Dulles was recovering from cancer

⁶⁰ Cunningham interview (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

124

surgery), JCS Chairman Adm. Arthur Radford, DCI Allen Dulles, and Richard Bissell, Eisenhower explained why he refused to allow overflights of the Soviet Union: "Everyone in the world says that, in the last six weeks, the United States has gained a place it hasn't held since World War II. To make trips now would cost more than we would gain in form of solid information." Hoover agreed and noted, "If we lost a plane at this stage, it would be almost catastrophic." Torn between his desire to maintain a "correct and moral" position and his wish to know what the Soviet Union was up to, the President finally authorized several overflights of Eastern Europe and the Soviet border, "but not the deep one," adding that the aircraft should "stay as close to the border as possible."⁶¹

The first of these flights, mission 4016 on 20 November 1956, was the first overflight of Soviet territory since 10 July. This mission left Adana and flew east over Iran, then reversed and flew west along the Soviet-Iranian border to Soviet Armenia, where it crossed into the Soviet Union and photographed Yerevan. An electrical malfunction then forced the pilot, Francis Gary Powers, to return to Adana. Soviet interceptor aircraft made several unsuccessful attempts to reach this U-2, and the Soviet Government sent a secret protest note to Washington.⁶²

On 10 December, Bulgaria was the target of two U-2 missions, one (4018) from Detachment B at Adana and another (2029) from Detachment A at Giebelstadt. Bulgarian fighter aircraft made 10 different attempts to intercept the first mission, but the flight proceeded without difficulty.⁶³

The second flight came close to crashing but not through the efforts of interceptors. The pilot of mission 2029 was Carmine Vito, who had flown the first U-2 mission over Moscow on 5 July. He was known to his colleagues as the Lemon-Drop Kid because he always carried these hard candies in the knee pocket of his flight suit. Despite

⁶¹ Andrew J. Goodpaster, Memorandum of Conference with the President, November 15, 1956, WHOSS, Alpha, DDEL (TS); Ambrose, *Eisenhower: The President*, p. 374.

⁶² Mission folder 4016, 20 November 1956, OSA records, job 67-B-972, box 7 (TS Codeword).

⁶³ Mission folders 2029 (10 December 1956) and 4018 (10 December 1956), OSA records, job 67-B-328, box 7 and job 67-B-972, box 7 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

125

warnings to all pilots about the danger of opening the helmet faceplate at high altitudes, several pilots were known to do so. Some ate candy bars; Vito favored lemon drops. On the morning of 10 December, while Vito was undergoing prebreathing, the Air Force enlisted man who oversaw his preflight regimen placed an L-pill in the righthand knee pocket of Vito's flight suit, unaware that this pocket also contained Vito's supply of lemon drops. After he took off, Vito began indulging in his habit of sucking lemon drops. About midway into the mission, he opened his faceplate and popped into his mouth what he thought was another lemon drop. After closing the faceplate, he began sucking on the object and thought it strange that it had no flavor and was much smoother than the previous lemon drops. Although tempted to bite down, Vito decided instead to reopen his faceplate and see what it was he had in his mouth. Spitting the object into his hand, he saw that he had been sucking on the L-pill with its lethal contents of potassium cyanide. Just a thin layer of glass had stood between him and death. The loss of his aircraft over Bulgaria would have exposed the U-2 program to worldwide publicity and would probably have resulted in an early end to overflights.⁶⁴

Detachment A's security officer overheard Vito relating the L-pill story to a fellow pilot several days later and promptly reported the conversation to headquarters. When details of Vito's close call reached Washington, James Cunningham immediately ordered L-pills placed in boxes so that there would be no chance of mistaking them for anything else. The L-pill continued to be available for another three years. Then in January 1960, the commander of Detachment B, Col. William Shelton, raised an important question that had never been considered: what would happen if an L-pill with its volatile contents accidentally broke inside the cockpit of a U-2? Realizing that such an accident would result in the death of the pilot, James Cunningham ordered the destruction of all L-pills and then turned to the Technical Services Division (TSD) for a better idea. By this time the state of the art in lethal devices was a needle poisoned with algal, an extremely deadly shellfish toxin. The needle was hidden in a tiny hole in a silver dollar supplied by Cunningham. Only one poison-needle coin was made because Cunningham decided that, if any pilot had to use it because of capture, there would probably not be any more overflights.⁶⁵

⁶⁴ Cunningham interview (TS Codeword); Carmine Vito, interview by Donald E. Welzenbach, Washington, DC, 7 May 1986 (S).

⁶⁵ Cable from Detachment B to Development Projects Division (DPD), 4 January 1960; cable from DPD to Detachment B, 7 January 1960, OSA records, job 67-B-972, box 18, "Operation KNIFE EDGE" (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

126

Although the U-2 overflights of Eastern Europe in late 1956 caused renewed Soviet protests, the sharpest protest came on 15 December 1956, after three specially modified USAF RB-57D bombers photographed the city of Vladivostok in a high-speed dash over the Far Eastern coast of the Soviet Union (as part of the Air Force's Operation BLACK KNIGHT). President Eisenhower had approved the mission after being told by the Air Force that the high-speed RB-57Ds would probably not be detected.⁶⁶

Reacting strongly to the Soviet protest, the President told Secretary of State Dulles on 18 December that he was going to "order complete stoppage of this entire business." As for a reply to the Soviet protest, Dulles said, "I think we will have to admit this was done and say we are sorry. We cannot deny it." Dulles noted that "our relations with Russia are pretty tense at the moment." Eisenhower agreed, noting that this was no time to be provocative. He then instructed Colonel Goodpaster to call Secretary of Defense Wilson, Joint Chiefs of Staff Chairman Radford, and DCI Dulles to order: "Effective immediately, there are to be no flights by US reconnaissance aircraft over *Iron Curtain* countries."⁶⁷

Flights along the borders of Iron Curtain countries continued, however, and, on 22 December 1956, Detachment B flew the first mission (4019) by a U-2 equipped for electronic intercept. The electronic-detection equipment known as the System-V unit (see appendix C) was installed in the bay normally used by the main camera, and the plane flew along the Soviet border from the Black Sea to the Caspian Sea and on to Afghanistan. The System-V unit worked well.⁶⁸

Early in 1957, a mission along the Soviet border accidentally turned into an overflight. On 18 March 1957, a U-2 collecting electronic intelligence along the Soviet southern border entered Soviet

⁶⁶ Goodpaster interview (S).

⁶⁷ Telephone calls 18 December 1956, DDE Diary, DDEL, (U); Andrew J. Goodpaster, Memorandum for the Record, 18 December 1956, WHOSS, Alpha, DDEL (TS, downgraded to S); the Soviet protest note of 15 December 1956 and the U.S. reply of 11 January 1957 are contained in "Alleged Overflight of Soviet Area by American Planes," *US Department of State Bulletin*, vol. 36, 28 January 1957, p. 135. Although Dulles's initial inclination had been to offer an apology, the U.S. reply stated that the "only authorized United States Air Force flights in the general area of the Sea of Japan were normal training activities."

⁶⁸ Mission folder 4019 (22 December 1956), OSA records, job 67-B-972, box 7 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

127

airspace because of compass error compounded by a slight error in the pilot's dead reckoning. Because of heavy cloud cover, the pilot, James W. Cherbonneau, did not realize he was over the Soviet Union until he saw Soviet fighters attempting to intercept him. These attempts at interception once again demonstrated the Soviets' ability to track the U-2 and their inability to harm it.⁶⁹

At this point in early 1957, the U-2 program was in limbo. Although the President would not allow U-2s to fly their primary mission of reconnaissance of the Soviet Union, he did not cancel the program and continued to authorize flights along Soviet borders. The CIA's overhead reconnaissance program also faced a renewed bid by the Air Force, which now had its own growing U-2 fleet, to gain control of the overflight program in the spring of 1957. The uncertainty surrounding the future of the project made planning and budgeting extremely difficult. In April 1957, Richard Bissell asked the DCI and DDCI to push for a decision on whether the U-2 program was to continue in civilian hands and what its scope was to be. In briefing papers prepared for the DCI, Bissell argued for maintaining a nonmilitary overflight capability, which could "maintain greater security, employ deeper cover, use civilian pilots, keep the aircraft outside military control, and, therefore, make possible more plausible denial of US military responsibility in the face of any Soviet charges." In urging the resumption of overflights, Bissell stated that four U-2 missions over border regions of the Soviet Union or Eastern Europe had been detected by the Soviets without causing any diplomatic protest. He also noted that the President's Board of Consultants on Foreign Intelligence Activities had unanimously recommended the resumption of overflights.⁷⁰

All of these issues were discussed on 6 May 1957, when President Eisenhower met with Deputy Secretary of Defense Donald Quarles, Air Force Chief of Staff Nathan Twining, Acting Secretary of State Christian Herter, and three CIA officials—DCI Dulles, DDCI Cabell, and Richard Bissell. The President expressed concern about the impact of overflights on US-Soviet relations and about possible Soviet responses such as closing off access to Berlin. Although

⁶⁹ Information supplied by James W. Cherbonneau to Donald E. Welzenbach (S); Mission folder 4020 (18 March 1957). OSA records, job 67-B-972, box 7 (TS Codeword).

⁷⁰ *OSA History*, chap. 4, pp 15-16; annex 22 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

128

remaining opposed to flights over most of the Soviet Union, Eisenhower finally agreed to permit some flights over peripheral areas such as Kamchatka Peninsula and Lake Baikal, as well as the Soviet Union's atomic testing area at Semipalatinsk. Such overflights could be staged from Pakistan if the Pakistani Government consented. The President rejected the Air Force's request to take over the U-2 program, stating that he preferred to have the aircraft manned by civilians "during operations of this kind."⁷¹

The President had once again agreed to allow overflights of the Soviet Union, although only over certain areas, because the need to learn more about the capabilities and intentions of the Soviet Union was too compelling. In particular, the President and top administration officials wanted to gather more data on the Soviet Union's missile program, a subject for which considerable Soviet boasting—but no hard data—was available.

Even after he had authorized the resumption of overflights, President Eisenhower maintained tight control over the program. He personally authorized each overflight, which meant that Richard Bissell would bring maps to the White House with the proposed routes marked on them for the President to examine. More than once, according to Bissell, Eisenhower spread the map out on his Oval Office desk for detailed study, usually with his son John (an Army officer serving as a White House aide) and Colonel Goodpaster looking over his shoulder. On occasion, the President would pick up a pencil and eliminate a flight leg or make some other correction to the flight plan.⁷²

RADAR-DECEPTIVE "DIRTY BIRDS"

One additional reason why President Eisenhower had again authorized overflights of the Soviet Union was renewed CIA promises that Soviet detection or tracking of the U-2 was unlikely. At the 6 May 1957 meeting with the President, Richard Bissell reported on the progress that had been made in developing radar camouflage and

⁷¹ Andrew J. Goodpaster, Memorandum of Conference with the President, 6 May 1957 (TS); "Record of Action—Meeting of May 6, 1957," WHOSS, Alpha, DDEL (TS).

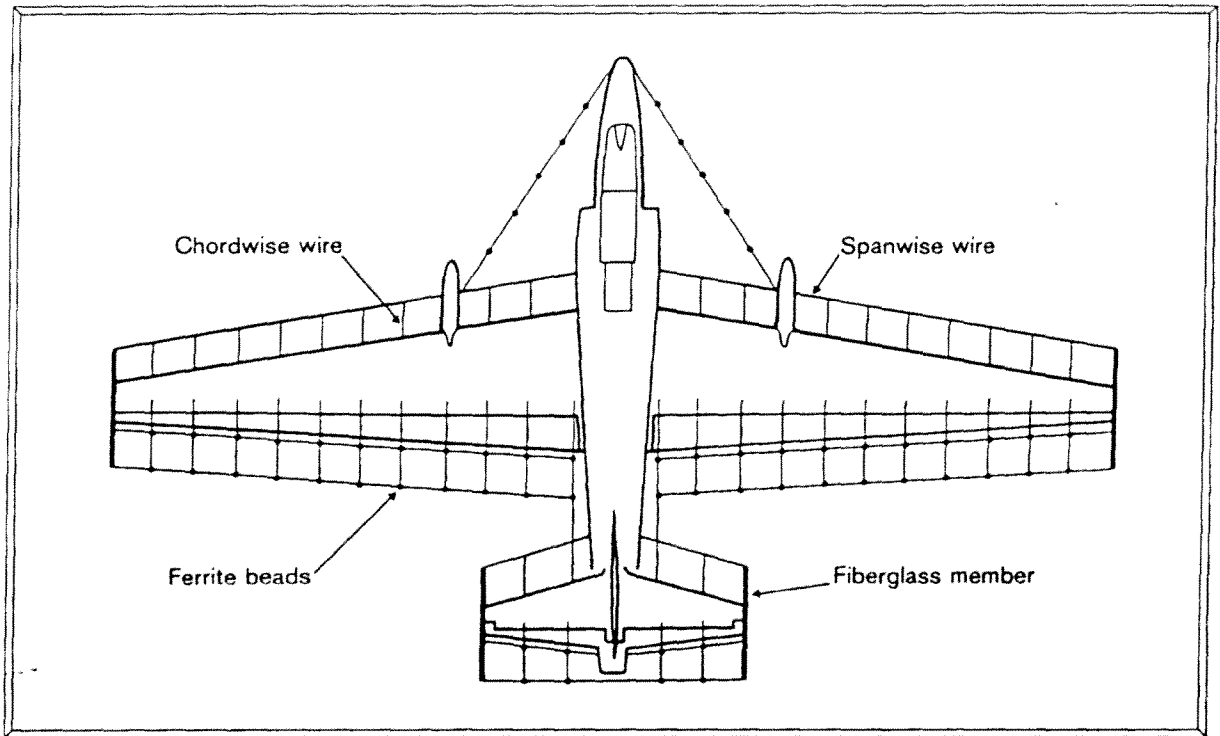
⁷² Bissell interview by Weizenbach (S); Beschloss, *Mayday*, p. 140.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

129



absorption devices for the U-2. Once these devices were installed on the operational U-2s, he explained, the "majority of incidents would be undetected."⁷³

"Trapeze" antiradar attachments to the U-2

Work on methods of reducing the U-2's vulnerability to radar detection had begun in the fall of 1956 as the result of President Eisenhower's disenchantment with the overflight program following Soviet detection and tracking of the first series of U-2 missions. The CIA proprietary firm Scientific Engineering Institute was conducting this research under a project codenamed RAINBOW. SEI Chief Engineer Dr. Franklin A. Rodgers, formerly of MIT, converted the theories of Harvard physicist Edward Purcell into systems that could be used on aircraft. SEI's radar-deception system consisted of a series of attachments to the U-2. First bamboo poles and later fiberglass rods were attached to the wings, where they would not interfere with the control surfaces. At the ends of these poles, completely circling

⁷³ Andrew J. Goodpaster, Memorandum of Conference with the President, 6 May 1957 (TS); "Record of Action—Meeting of May 6, 1957," WHOSS, Alpha, DDEL (TS).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

130

the aircraft, was a small-gauge wire with precisely spaced ferrite beads. The wire and beads were supposed to capture incoming 70-MHz radar pulses and either trap them in the loop or weaken them so much that they would not register as a valid radar return. This configuration was called the trapeze and was not very successful.

A second approach, tested in early 1958, involved the use of plastic material containing a printed circuit designed to absorb radar pulses in the 65- to 85-MHz range. Nicknamed "wallpaper," this material was glued to parts of the U-2's fuselage, nose, and tail. Although the "trapeze" and "wallpaper" systems provided protection against some Soviet radars, the systems proved ineffective against radars operating below 65-MHz or above 85-MHz. Furthermore, both of these additions degraded the U-2's performance. The weight and drag of "trapeze" reduced the aircraft's operating ceiling by 1,500 feet, and "wallpaper" sometimes caused engines to overheat.⁷⁴

SEI's research results were tested by another firm known as Edgerton, Germeshausen & Grier (EG&G), which was also composed of MIT faculty members. Under an Air Force contract to evaluate radars, EG&G operated a small testing facility at Indian Springs, Nevada, not far from Area 51. Although Kelly Johnson had been closely involved with the radar deception project since its early days, he cooperated reluctantly because he disliked adding attachments that made his aircraft less airworthy. (Johnson's dislike of the antiradar attachments was reflected in the unofficial nickname for aircraft that had been so modified—"dirty birds.") After Lockheed mechanics had mounted the various RAINBOW devices on the prototype U-2, a Lockheed test pilot would fly the plane over EG&G's Indian Springs installation. This was little more than a series of radar sets and a trailer containing instrumentation. EG&G technicians could thus record and evaluate the U-2's radar returns as it traversed a specified course over their facility.⁷⁵

This method of testing radar-deceptive modifications proved both time consuming and dangerous. During a test flight on 2 April 1957, the "wallpaper" modification acted as insulation around the

⁷⁴ Records of the Scientific Engineering Institute (Project HTNAMABLE), OSA records (TS Codeword).

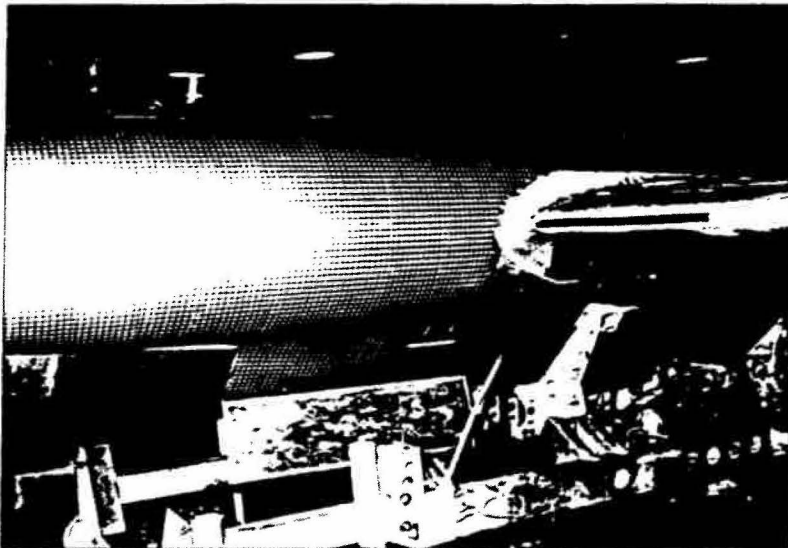
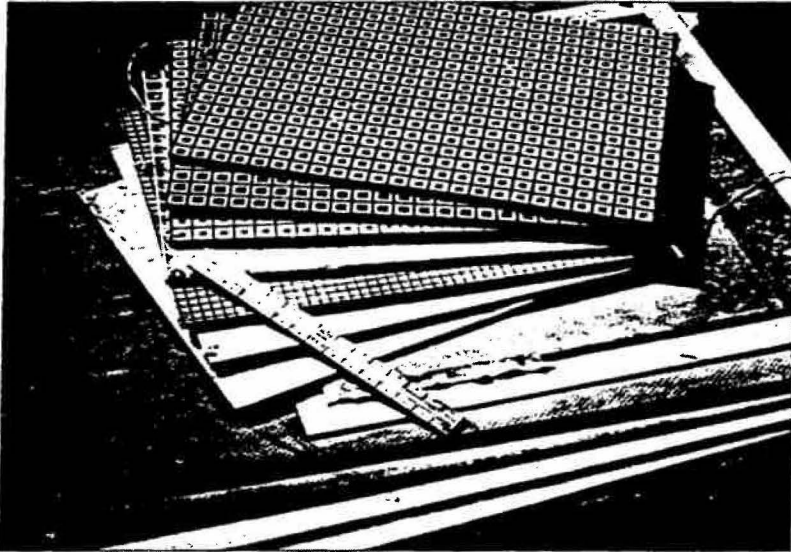
⁷⁵ References to EG&G programs for the U-2 are contained in the later Convair contracts for Projects FISH and KINGFISH, OSA records, job 67-B-415, box 1 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

131



"Wallpaper"

engine of the U-2 known as article 341, causing it to overheat and flameout. Unable to restart the power plant, Lockheed test pilot Robert Sieker bailed out but was struck and killed in midair by the U-2's tailplane. The aircraft crashed in an area of Nevada so remote that Area 51 search teams needed four days to locate the wreckage. The extensive search attracted the attention of the press, and a

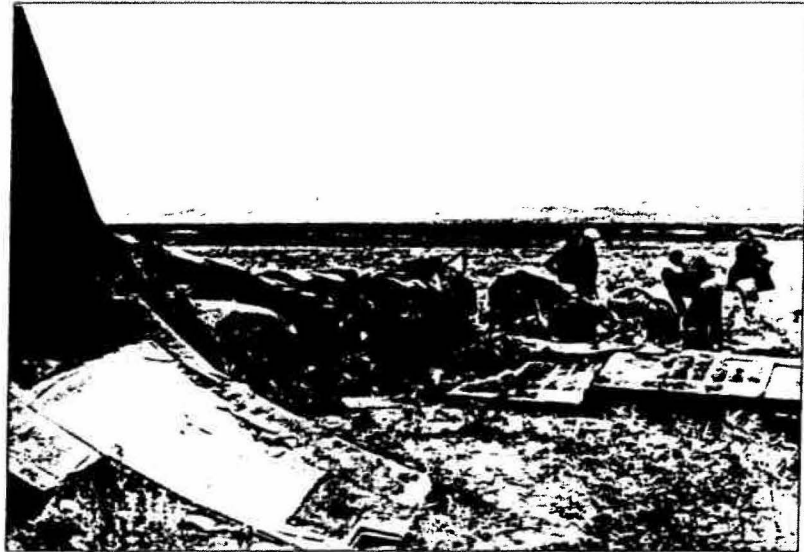
~~Secret~~

~~Secret NOFORN~~

Chapter 3

132

Wreckage of Article 341,
2 April 1957



12 April 1957 article in the *Chicago Daily Tribune* was headlined, "Secrecy Veils High-Altitude Research Jet; Lockheed U-2 Called *Super Snooper*."⁷⁶

Because of its large wingspan, an out-of-control U-2 tended to enter a classical flat spin before ground contact. This slowed descent and actually lessened the impact. If there was no fire after impact, the remains of crashed U-2s were often salvageable, as was the case with the wreckage of article 341. Kelly Johnson's crew at the Skunk Works used the wreckage, along with spares and salvaged parts of other crashed U-2s, to produce another flyable airframe for about \$185,000.⁷⁷ The U-2's ability to survive a crash in fairly good condition should have been noted by the Development Projects Staff for consideration in its contingency plans for a loss over hostile territory because the equipment on board the aircraft could easily compromise the weather research cover story.

The loss of one of Lockheed's best test pilots, as well as the prototype "dirty bird" U-2, led Kelly Johnson to suggest that Lockheed install a large boom at the Indian Springs radar test facility. Using the

⁷⁶ Accident folder, crash of 2 April 1957, OSA records (S).

⁷⁷ Lockheed contracts, OSA Records (S).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

133

boom, which could lift entire airframes 50 feet in the air, technicians could change the airframe's attitude and run radar tests almost continuously without having to fuel and fly the plane.⁷⁸

By the summer of 1957, testing of the radar-deception system was complete, and in July the first "dirty bird" (DB) arrived at Detachment B. The first operational use of this aircraft occurred on 21 July 1957 in mission 4030 over Iran, Iraq, and Syria. On 31 July, the same aircraft made a run over the Black Sea. There were a total of nine DB missions over the USSR. The antiradar system did not prove very effective, and its use was curtailed in May 1958.⁷⁹

THE NEW DETACHMENT C

On 8 June 1957, a U-2 took off from Eielson Air Force Base in Alaska to conduct the first intentional overflight of the Soviet Union since December 1956. This mission broke new ground in two respects: it was the first overflight conducted from American soil and the first by the new Detachment C.

Detachment C (known officially as Weather Reconnaissance Squadron, Provisional-3) was composed of the third group of pilots to complete their training in Nevada. In the autumn of 1956, this third detachment needed a new base because Area 51 was about to become the training site for a large number of Air Force pilots who would fly the 29 U-2s purchased by the Air Force. The Agency decided that the best location for Detachment C would be the Far East and began looking for bases there.

Even without the arrival of the Air Force pilots, Detachment C could not have stayed in Nevada much longer. In June 1957, the entire facility had to be evacuated because the Atomic Energy Commission was about to conduct a series of nuclear tests whose fallout was expected to contaminate the Groom Lake facility. All remaining CIA personnel, materiel, and aircraft were transferred to Edwards AFB, California, and became known as Detachment G.

⁷⁸ Ibid (S).

⁷⁹ Cunningham interview (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

134

The search for a new home for Detachment C led the Agency to ask the Air Force in the autumn of 1956 for permission to locate the detachment at Yokota AFB, Japan. Because Yokota was already the base for one covert project (the very secret Air Force Project BLACK KNIGHT using RB-57s), Air Force Chief of Staff Twining did not wish to locate another one there and denied the request. The Agency then turned to the Navy, which granted permission for Detachment C to use the Naval Air Station at Atsugi, Japan. The Japanese Government received no notification of the proposed deployment because at that time it had no control over activities involving US military bases in Japan. Deployment of Detachment C began in early 1957 but was complicated by a recent decision to permit the families of Project AQUATONE employees to accompany them on overseas tours. As a result, program managers had to find housing facilities on the base or in nearby communities, not an easy task in crowded Japan.³⁰

Detachment C began conducting missions in June 1957 after several aircraft and pilots flew to Eielson Air Force Base near Fairbanks, Alaska. Air Force radar order-of-battle reports and NSA studies had revealed that the radar network in the Soviet Far East, with antiquated radar sets and personnel of a lower caliber than those in the western Soviet Union, was relatively ineffective. To take advantage of these weaknesses, Detachment C staged three missions from Alaska into the Soviet Far East. The first, on 7/8 June (the aircraft crossed the international date line during the flight), was unable to photograph its target, the ICBM impact area near Klyuchi on the Kamchatka Peninsula, because of bad weather and, therefore, never entered Soviet airspace. A second attempt to photograph Klyuchi on 19/20 June was marred by a camera malfunction that ruined every third frame of photography. This flight was tracked by Soviet radars, but there was no attempt at interception. After a pause of almost three months during which Detachment C received a dirty-bird U-2, the detachment's third mission over Klyuchi on 15/16 September 1957 achieved excellent results. The radar-deception devices proved ineffective, however, as the U-2 was tracked by Soviet radar and trailed by five fighters.³¹

³⁰ *OSA History*, chap. 15, pp. 2, 16-19; chap. 16, p. 1 (TS Codeword).

³¹ Mission folders 6002 (8 June 1957), 6005 (20 June 1957), and 6008 (16 September 1957), OSA records, job 67-B-328, box 7 (TS Codeword).

~~Secret~~

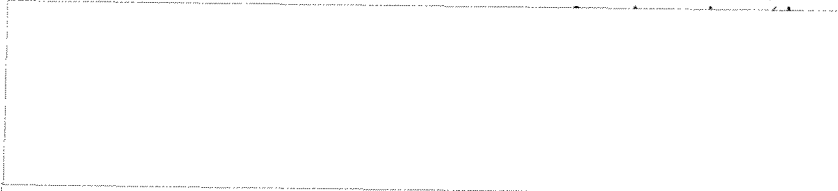
~~Secret NOFORN~~

Chapter 3

135

DETACHMENT B FLIGHTS FROM PAKISTAN

The most important series of overflights in the summer of 1957 were those that Detachment B staged to gather intelligence on the Soviet Union's guided missile and nuclear programs. President Eisenhower had approved these overflights at the meeting on 6 May 1957, pro-



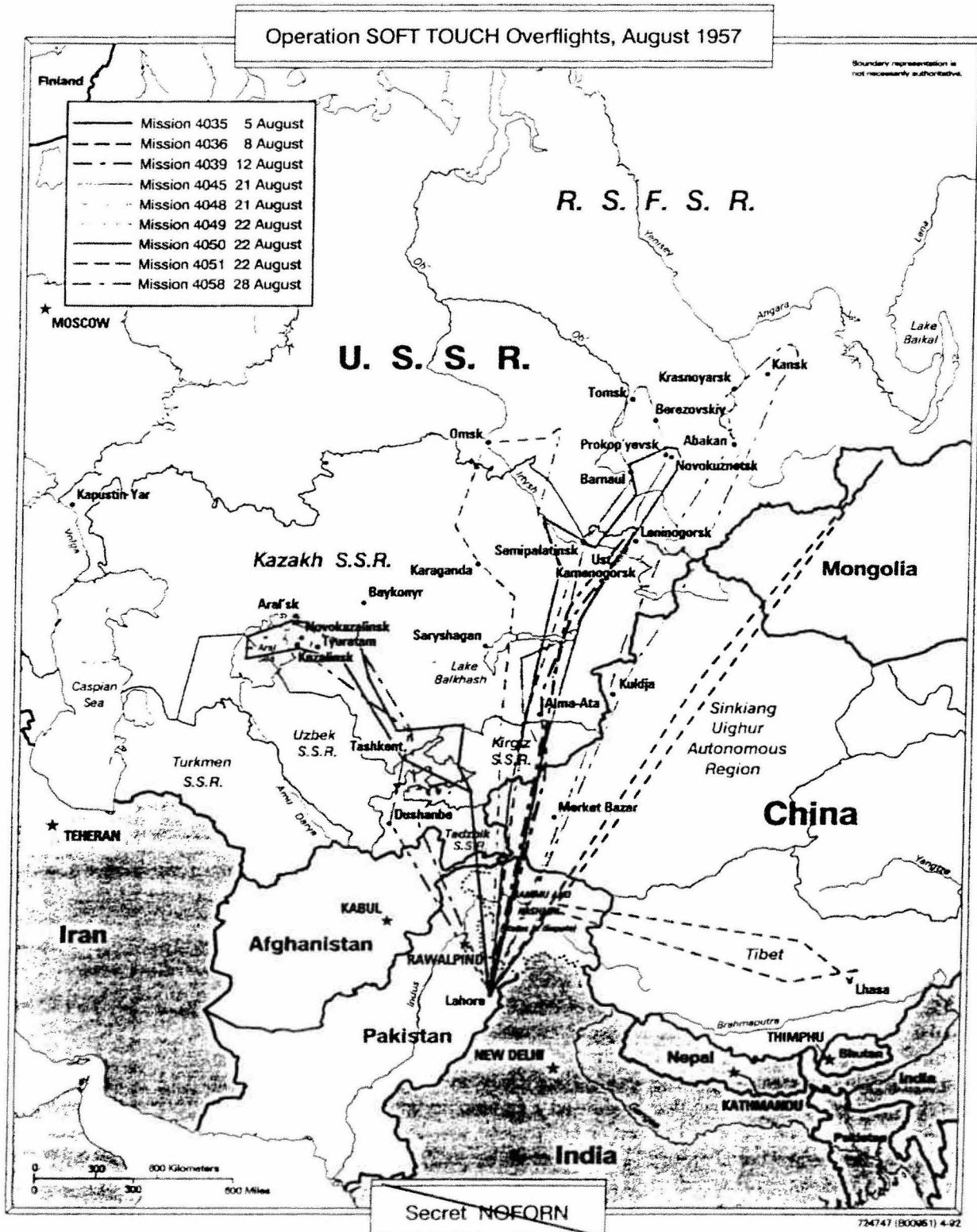
The airfield at Peshawar, a more desirable location, was not available because of repair work. Detachment B at Ankara ferried four of its U-2s, two of which were dirty birds, to Lahore. A C-124 brought in eight pilots and ground crews to prepare for missions over the Soviet Union and the People's Republic of China (PRC) beginning on 4 August (Operation SOFT TOUCH). During a 23-day period, these aircraft made nine flights: seven over the USSR and two over the PRC. Although one of the seven flights over the USSR was a failure because the camera malfunctioned after taking only 125 exposures, the remaining missions over Central Asia were a complete success, producing a bonanza of information that kept scores of photointerpreters busy for more than a year.⁴²

The 5 August flight, a dirty bird piloted by Buster Edens, was the first to photograph the major Soviet space launch facility east of the Aral Sea in Kazakhstan. None of the mission planners was certain just where the range was located, so the U-2 pilot followed the rail lines in the area. As a result, the plane did not pass directly over the rangehead and obtained only oblique photography.

Although known in the West today as Tyuratam, this missile installation had no name when it was first photographed in August 1957. In preparation for a briefing to President Eisenhower on the SOFT TOUCH photography, Dino Brugioni, an assistant to PID chief Arthur Lundahl, examined all the existing maps of the area to see if he could find a place name for the missile base. Only one map, made by the Germans during World War II, showed a community in the vicinity of the missile facility. The settlement's name was Tyuratam, which means "arrow burial ground" in the Kazakh language, and this

⁴² *OSA History*, chap. 12, pp. 19-20 (TS Codeword); *NPIC History*, vol. 1, pp. 159-161 (S).

~~Secret~~



~~Secret NOFORN~~

Chapter 3

137



*U-2 photography of Tyuratam
Missile Testing Range*

was the name Brugioni gave the missile base. Official Soviet releases concerning this base have always referred to it as Baykonur, but the community of Baykonur is actually more than 200 miles north of Tyuratam.⁴³

While PID was still analyzing the SOFT TOUCH photography, the Soviet Union announced the successful launch of an intercontinental ballistic missile (ICBM) from Baykonur (Tyuratam). On 26 August 1957, the Soviet news agency TASS stated that a "super-long-range multistage intercontinental ballistic rocket" had been successfully tested, adding "it is now possible to send missiles to any

⁴³ Lundahl and Brugioni interview (TS Codeword).

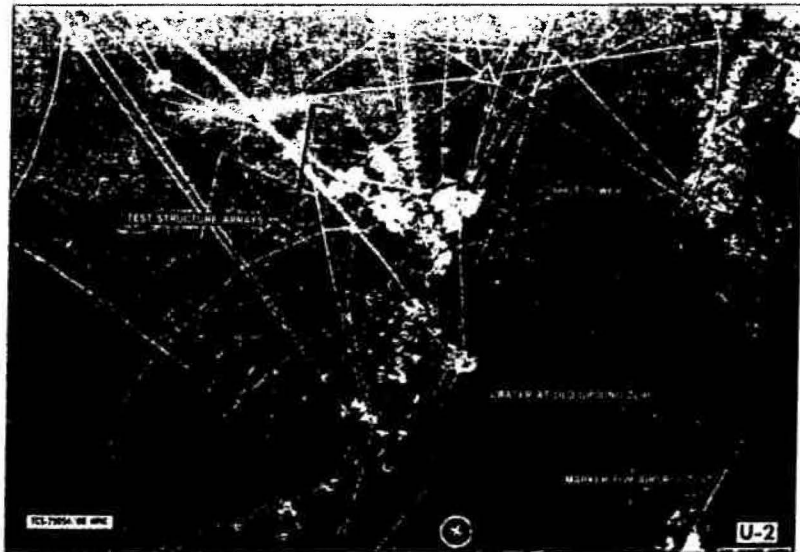
~~Secret~~

~~Secret NOFORN~~

Chapter 3

138

*Semipalatinsk Nuclear
Weapons Proving Ground,
22 August 1957*



part of the world.”⁴⁴ The Soviet announcement made the intelligence community want even more information on Tyuratam, and a second U-2 piloted by Edwin K. Jones flew over the area on 28 August 1957, just one week after the Soviet ICBM launch. This mission obtained excellent vertical photographs of the main launch complex, and photointerpreters soon determined that the Soviets had only one launchpad at Tyuratam. The base was not photographed again until 9 July 1959, at which time it still had only one launch pad, although two more were under construction.⁴⁵

On 20 and 21 August 1957, U-2s conducted the first overflights of the Soviet nuclear testing grounds at Semipalatinsk, north-northwest of Lake Balkhash. The first mission, piloted by Sammy V. C. Snider, passed over part of the proving grounds, flew on to Novokuznetsk, and then proceeded to Tomsk, where it began its return leg that included coverage of a very large uranium-processing facility at the new city of Berezovskiy. In the second mission, James Cherbonneaux flew directly over the Semipalatinsk proving grounds only four hours before a half-megaton device was detonated. In fact, the U-2 unknowingly photographed the aircraft that was to drop the

⁴⁴ “Is Russia Ahead in Missile Race,” *US News and World Report*, 6 September 1957, pp. 30-33.

⁴⁵ Mission folders 4058 (28 August 1957) and 4125 (9 July 1959), OSA records, job 67-B-972, boxes 8 and 11 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 9

139

nuclear device. These photographs also revealed evidence of a recent, low-yield, above-ground nuclear test [REDACTED]

On its way to Semipalatinsk, the 21 August mission flew a search pattern over the western end of Lake Balkash looking for another Soviet missile-related installation and made the first photographs of what was later determined to be the new missile test center at Saryshagan. This facility was used to test radars against incoming missiles fired from Kapustin Yar, 1,400 miles to the west. Saryshagan later became the center for the development of the Soviet Union's advanced antiballistic missile (ABM) weapon system.

On 23 August 1957, DDCI Cabell, Richard Bissell, and Air Force Chief of Staff Twining met with President Eisenhower to report on the results of Operation SOFT TOUCH. They showed the President some of the photographic results of the earlier missions and reported on the effects of the antiradar measures. Although the antiradar measures had not proved successful, the photographic yield from the missions was extremely valuable. Bissell then informed the President that the SOFT TOUCH operation was just about to conclude with the transfer of the aircraft back to Adana. He asked permission for one of the U-2s to make another overflight of the Soviet Union on this return trip, but the President denied the request, not wishing to conduct any more overflights than were necessary.⁴⁷

THE DECLINE OF DETACHMENT A

During the summer of 1957, all overflights of the Soviet Union were conducted by either Detachment B or Detachment C. Detachment A in Germany was a less desirable starting point for overflights of the Soviet Union because such missions had to cross Eastern Europe first, increasing the likelihood of detection and diplomatic protests. Furthermore, the Soviet Union's air defense and radar networks were strongest along its western borders, so Detachment B missions over the southern portion of the Soviet Union and Detachment C missions

⁴⁶ Mission folder 4045 (20 August 1957) and 4050 (21 August 1957). OSA records, job 67-B-972, box 8 (TS Codeword).

⁴⁷ Andrew J. Goodpaster, Memorandum for the Record, 23 August 1957, WHOSS, Alpha, DDEL (TS).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

140

in the Far East were less risky than those conducted by Detachment A. Finally, the main target of U-2 photography after the bomber issue receded was Soviet missile and nuclear progress. The testing areas for these weapons were located in the vast open spaces of the south-central and eastern portions of the Soviet Union, which lay beyond the range of Detachment A's aircraft.

The decline in importance of Detachment A had begun with the President's standdown order of 10 July 1956. During the next three months, the detachment conducted only 11 missions, all over the Mediterranean region rather than the original target of the Soviet Union, and the slow pace of activity and change in mission adversely affected pilot morale. One of the detachment's aircraft was lost in a crash on 17 September, killing pilot Howard Carey and garnering unwanted publicity. Conditions improved when the detachment moved to the newly renovated facility at Giebelstadt in early October 1956, but security now became a problem there. Detachment A personnel discovered that a long, black Soviet-Bloc limousine was parked at the end of the Giebelstadt runway whenever the U-2s took off.⁸⁸

During the next year, Detachment A mounted only four overflights. The first two were over Eastern Europe: one over Bulgaria on 10 December 1956 and the other over Albania on 25 April 1957. Then a long period of inactivity followed, ending with a third mission on 11 October 1957, which conducted electronic surveillance of Soviet naval maneuvers in the Barents Sea. The final overflight of Detachment A, mission 2040 on 13 October 1957, flew north over

Although the final missions of Detachment A achieved excellent results, project headquarters had already decided that Western Europe was not a satisfactory location for overflights of the Soviet Union and had notified Detachment A on 20 September 1957 that its operations would cease in November. By 15 November 1957, all of the detachment's personnel and aircraft had returned to the United States. During Detachment A's 17-month period of operations, seven pilots

⁸⁸ *OSA History*, chap. 11, pp. 41-42 (TS Codeword).

⁸⁹ Mission folders 4018 (10 December 1956), 2036 (25 April 1957), 2037 (11 October 1957), 2040 (13 October 1957), OSA records, job 67-B-972, box 7, and job 67-B-328, box 6 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

142

had flown a total of 23 missions: six over the Soviet Union, five over Eastern Europe, and most of the remaining 12 missions over the Mediterranean area.⁹⁰

⁹⁰ *OSA History*, chap. 11, p. 44; chap. 19, annex 120 (TS Codeword).

⁹¹ *Ibid.*, chap. 11, pp. 44-45 (TS Codeword); *NPIC History*, vol. 3, pp. 447-8 (S).

⁹² Mission folders 1482 (9 October 1958), 4092 (25 October 1958), and 4093 (6 November 1958), OSA records, job 67-B-972, boxes 3 and 10.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

143

DECLINING OVERFLIGHT ACTIVITY

Operation SOFT TOUCH (4-27 August 1957) proved to be the high water mark of U-2 operations against the Soviet Union. Detachment B staged one more overflight on 10 September 1957, when a U-2 piloted by William Hall flew from Adana to photograph the Kapustin Yar Missile Test Range for the first time since the RAF's overflight in 1953, obtaining photographs of a large medium-range ballistic missile (MRBM) on the launchpad. Six days later Detachment C conducted its successful overflight of the ICBM impact site at Klyuchi, and October saw the final two overflights of Detachment A. After these missions, penetration overflights became a rarity. There would be only six more during the next 32 months: one, in 1958; two, in 1959; and three, in 1960 (one of which was unsuccessful). During this period, President Eisenhower did authorize a number of flights along Soviet border areas that occasionally penetrated short distances inside the border, but the Chief Executive had become extremely wary of authorizing "deep penetration" overflights, which invariably brought protests from Moscow.

The border flights took place under tight controls. Beginning in the fall of 1957, all messages from Washington to Adana giving coordinates for flights along the Soviet border contained the statement: "This is not a penetration overflight" and warned about flying too close to Soviet borders. The Soviets even attempted to shoot down

~~Secret~~

~~Secret NOFORN~~

Chapter 3

144

U-2s flying well within international airspace above the Black Sea, as was the case on 27 October 1957, when electronic intelligence equipment on a U-2 flight over the Black Sea that never violated Soviet airspace revealed 12 attempts at interception by Soviet fighters.⁹³

The sole U-2 overflight of 1958 was conducted by a dirty bird from Detachment C. On 1 March 1958, mission 6011 overflew the Soviet Far East and photographed the Trans-Siberian Railroad, Sovetskaya Gavan', the Tatar Strait, and a strange installation at Malaya Sazanka, which was eventually determined to be a structure for mating nuclear devices with their detonators. This was the first and only U-2 overflight of the Soviet Union staged from Japan.⁹⁴

On 5 March 1958, the Soviet Union delivered a vigorous protest concerning this mission, prompting President Eisenhower to tell Colonel Goodpaster on 7 March to inform the CIA that U-2 flights were to be "discontinued, effective at once."⁹⁵ This standdown was to last more than 16 months, until July 1959. The Soviets had not been fooled by the antiradar devices carried by mission 6011, as was demonstrated by the detailed information about the mission contained in a Soviet aide-memoire delivered on 21 April 1958. It was clear that dirty bird aircraft were not effective and that Soviet radar operators had little difficulty in tracking them. At this point, the Agency abandoned the use of the antiradar devices on the U-2. As a substitute, Lockheed began working to develop a paint with radar-suppressant qualities, but this project also proved unsuccessful.

The U-2s were not the only cause for the Soviet protests that so vexed the President. On 27 June 1958,

Ten days later the Air Force began launching balloons designed to fly across the Soviet Union and Eastern Europe. This new balloon project (known as WS-461L) had been authorized by President Eisenhower on 25 June after Deputy Secretary of Defense Donald Quarles argued that a small number of balloons should be

⁹³ Mission folder 4061 (27 October 1957), OSA records, job 67-B-972, box 8 (TS Codeword).

⁹⁴ Mission folder 6011 (1 March 1958), OSA records, job 67-B-972, box 13 (TS Codeword).

⁹⁵ Andrew J. Goodpaster, Memorandum for the Record, 7 March 1958, WHOSS, Alpha, DDEL (TS, declassified).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

145

launched to take advantage of a newly discovered change in the west-to-east jet stream. Normally, this fast-moving air current stayed at an altitude of 55,000 feet, but, during June and July, it turned abruptly upward over the Bering Sea just west of Alaska, climbed to 110,000 feet, and then reversed direction. One of the key arguments that convinced the President to approve the project was Quarles's claim that the balloons' "chance of being detected is rather small and their identification or shutdown practically nil."⁶⁶

Release of the balloons took place from an aircraft carrier in the Bering Sea on 7 July 1958. Nothing was heard about them until 28 July, when Poland sent a note protesting the overflight of a US-made, camera-carrying balloon that had fallen to earth in central Poland. The loss of this balloon was because of human error. Each balloon was equipped with a timing device that would cause it to drop its camera and film payload after crossing the target areas. An Air Force technician aboard the aircraft carrier had calculated that the balloons should cross the Eurasian landmass in about 16 days. Thus, he adjusted regulators aboard the balloons to cause automatic descent after 400 hours aloft. When bad weather delayed the launch for three successive days, however, the technician forgot to reset the timing devices. As a result, one payload fell into Poland. None of the three WS-461L balloon payloads was recovered.⁶⁷

The Polish protest was quickly followed by a Soviet note protesting the balloons' violation of the Soviet Union's airspace. Several months later, the Soviets placed the US balloon and photographic equipment on display in Moscow for the world's press. President Eisenhower was angry that the Defense Department's assurances that the balloons would not be detected had proved false. Even worse, one of the balloons had been recovered by the Poles because the Air Force had disobeyed his instructions for the balloon project. When the Air Force had proposed the use of timers to bring down the balloons at the end of the mission, Eisenhower had said no, fearing that a malfunction could cause the balloons to come down prematurely. Furious at the Air Force's insubordination, the President ordered General

⁶⁶ Andrew J. Goodpaster, Memorandum for the Record, 25 June 1958, WHOSS, Alpha, DDEL (TS).

⁶⁷ Donald E. Welzenbach, "Observation Balloons and Weather Satellites," *Studies in Intelligence* 30 (Spring 1986): pp. 26-28 (S).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

146



*Equipment from a WS-461L
balloon on display in Moscow,
11 October 1958*

Goodpaster on 29 July 1958 to tell the Air Force that "the project is to be discontinued at once and every cent that has been made available as part of any project involving crossing the Iron Curtain is to be impounded and no further expenditures are to be made."⁹⁸

Two days later Eisenhower followed up this order with a formal memorandum to Secretary of Defense Neil McElroy telling him that "there is disturbing evidence of a deterioration in the processes of discipline and responsibility within the armed forces." He cited, in particular, "unauthorized decisions which have apparently resulted in certain balloons falling within the territory of the Communist Bloc" and overflights over routes "that contravened my standing orders."⁹⁹

On 2 September 1958, there was another violation of Soviet airspace when an unarmed Air Force EC-130 on an electronic intelligence collection mission crossed from Turkey into Soviet Armenia and was shot down by Soviet fighter aircraft. Six of the men on board were killed and the remaining 11 were never heard from again, despite State Department attempts to get the Soviet Union to reveal their fate.¹⁰⁰

⁹⁸ Andrew J. Goodpaster, Memorandum for the Record, 29 July 1958, WHOSS, Alpha, DDEL (S); Goodpaster interview (S).

⁹⁹ Quoted in Ambrose, *Eisenhower: The President*, pp. 475-476.

¹⁰⁰ "US Representations to the Soviet Government on C-130 Transport Shot Down by Soviet Fighter Aircraft," *US Department of State Bulletin*, 23 February 1959, pp. 262-271; Beschloss, *Mayday*, p. 159.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

147

President Eisenhower was disturbed by the increased superpower tension that had resulted from violations of Soviet airspace by US balloons and aircraft because he still hoped to enter into arms limitation negotiations with the Soviets. On 8 September 1958, the United States sent a note to the Soviet Union calling for a Soviet answer to US proposals for a "study of the technical aspects of safeguards against the possibility of surprise attack." One week later the Soviets agreed to participate and suggested that the talks begin in Geneva on 10 November 1958. President Eisenhower was also attempting to persuade the Soviet Union to begin talks aimed at eliminating the atmospheric testing of nuclear weapons. These efforts began with a 22 August 1958 offer to suspend US nuclear tests for one year on the condition that the Soviet Union also refrain from further tests and join in negotiations. On 30 August, Soviet Premier Nikita Khrushchev accepted the proposal and agreed to start talks on 31 October 1958 in Geneva. When the talks began, however, the Soviets refused to agree to a test ban and carried out nuclear tests at Semipalatinsk on 1 and 3 November. Nevertheless, during the late summer and early autumn of 1958, President Eisenhower, determined to reduce to a minimum any aggravation of the Soviets, kept the U-2 overflight program in limbo.¹⁰¹

In November 1958, relations with the Soviet Union worsened after Khrushchev precipitated a new crisis over West Berlin by announcing plans to sign a peace treaty with East Germany by May 1959. He stated that such a treaty would terminate Allied rights in West Berlin. Four days later, Soviet troops began harassing US Army truck convoys on the highways leading from West Germany to West Berlin. Although this new Berlin crisis never became as threatening as the blockade of 1948-49, President Eisenhower wished to avoid any actions that would provoke the Soviets. Tension over West Berlin was, therefore, an additional reason for continuing to keep the U-2 away from the Soviet Bloc.¹⁰²

CONCERNS ABOUT SOVIET COUNTERMEASURES AGAINST THE U-2

Another reason for President Eisenhower's growing reluctance to authorize flights over the Soviet Union may have been concern that the Soviets were developing countermeasures that would enable them to

¹⁰¹ Ambrose, *Eisenhower: The President*, pp. 489-491.

¹⁰² *Ibid.*, pp. 502-504.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

148

shoot down a U-2. Before the program started, Richard Bissell had estimated that the U-2 would be able to fly over the Soviet Union with impunity for only about two years. This period was already over, and the Soviets were working frantically to devise a means to stop U-2 overflights. From the very beginning, Soviet air defense units had not only tracked U-2s with radars, but had also made repeated efforts to shoot them down with anti-aircraft weapons and interceptor aircraft. In 1956 such attempted interceptions had involved primarily MiG-15s and MiG-17s, which could barely reach 55,000 feet. The advent of MiG-19s and MiG-21s, which could climb even higher, provided a greater threat for U-2 pilots.

Realistic training for pilots learning to intercept the U-2 became possible after the Soviets developed a new high-altitude aircraft, the Mandrake, which was actually an improved version of the Yakovlev-25 all-weather interceptor. The Mandrake used a high-lift, low-drag wing design similar to that employed by the U-2, but its twin engines made it heavier. The Mandrake's operating altitude was 55,000 to 65,000 feet, and its maximum altitude was 69,000, far less than the 75,000 feet reached by the U-2. Like the U-2, the Mandrake's wings would not tolerate great stresses, so it could not be used as an attack aircraft at the high altitudes at which both planes operated. Between 1957 and 1959, Yakovlev built 15 to 20 of these aircraft in two versions: the Mandrake-R or YAK-25RM and the Mandrake-T, sometimes called the YAK-26. These high-altitude aircraft were used to overfly the Middle East, India, China, and Pakistan, as well as border regions of NATO nations in Europe during the late 1950s and early 1960s. It is not believed that Mandrakes ever attempted to overfly the continental United States.¹⁰³

Beginning in late 1957, the Mandrake served as a practice target for pilots of high-performance Soviet MiG-19 and MiG-21 interceptors. The Soviet technique that most concerned U-2 pilots was the "snap up" or power dive and zoom climb. In this maneuver, ground-based radar operators would direct the interceptor aircraft along the same flight path as the U-2. When the MiG pilot achieved the same compass heading as the U-2 flying more than 10,000 feet above him, he would put his aircraft into a shallow dive to pick up

¹⁰³ "Yakovlev Yak-25RM Mandrake," *Jane's Defence Weekly*, vol. 3, no. 7, 16 February 1985.

~~Secret~~

~~Secret NOFORN~~

Chapter 3

149

speed, apply full throttle to the engine, then pull back on the stick and zoom as high as he could. In this manner the Soviet pilot hoped to come up directly beneath the U-2 so he could use his guns and missiles against the shiny U-2 etched in silver against the dark blue-black of space. Using this maneuver, some MiGs were able to climb as high as the U-2 but seldom got very close. At this height the MiGs were completely out of control; their small, swept-back wings provided insufficient lift; and their control surfaces were too small to maintain aircraft stability. U-2 pilots often spotted MiGs that reached the apex of their zoom climbs and then fell away toward the earth. The US pilots' greatest fear was that one of the MiGs would actually collide with a U-2 during a zoom climb.¹⁰⁴

U-2 pilots complained that they felt like ducks in a shooting gallery under these circumstances and suggested that the underside of the silvery aircraft be camouflaged in some manner. Kelly Johnson had originally believed the U-2 would fly so high that it would be invisible, thus eliminating the need to paint the aircraft and thereby avoiding the added weight and drag that paint produced. The paint penalty was calculated to be a foot of altitude for every pound of paint. A full coat of paint cost the U-2 250 feet of altitude, substantially less than the 1,500-foot penalty paid for the addition of dirty bird devices.

By late 1957, Johnson agreed that something had to be done. After a series of tests over Edwards AFB, Lockheed began coating the U-2s with a standard blue-black military specification paint on top and a lighter cloud-blue paint below. Subsequent tests over Nevada revealed that the U-2s were less conspicuous when painted all over with a matte-finish blue-black color, which helped them blend with the dark canopy of space.¹⁰⁵

MORE POWERFUL ENGINES FOR THE U-2

Less conspicuous paints were not the only answer to the growing threat of Soviet interceptors. A more powerful engine would increase the U-2's maximum altitude, which was the surest way to protect the aircraft from all Soviet threats. During late 1958 and early 1959, Lockheed began refitting the Agency's 13 remaining U-2s—originally the Agency had taken delivery of 20 planes and the Air

¹⁰⁴ Information supplied by Jacob Kratt and James Cherbonneaux to Donald E. Welzenbach, May 1986.

¹⁰⁵ Lockheed contracts, OSA records (S).

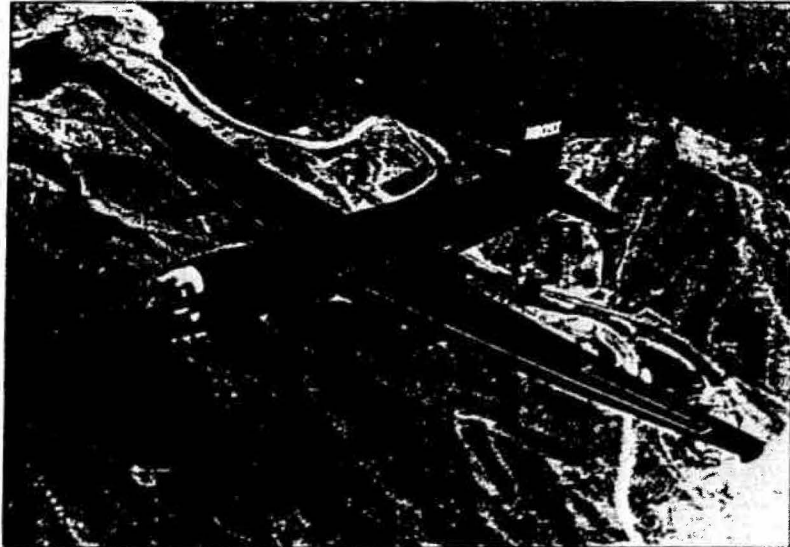
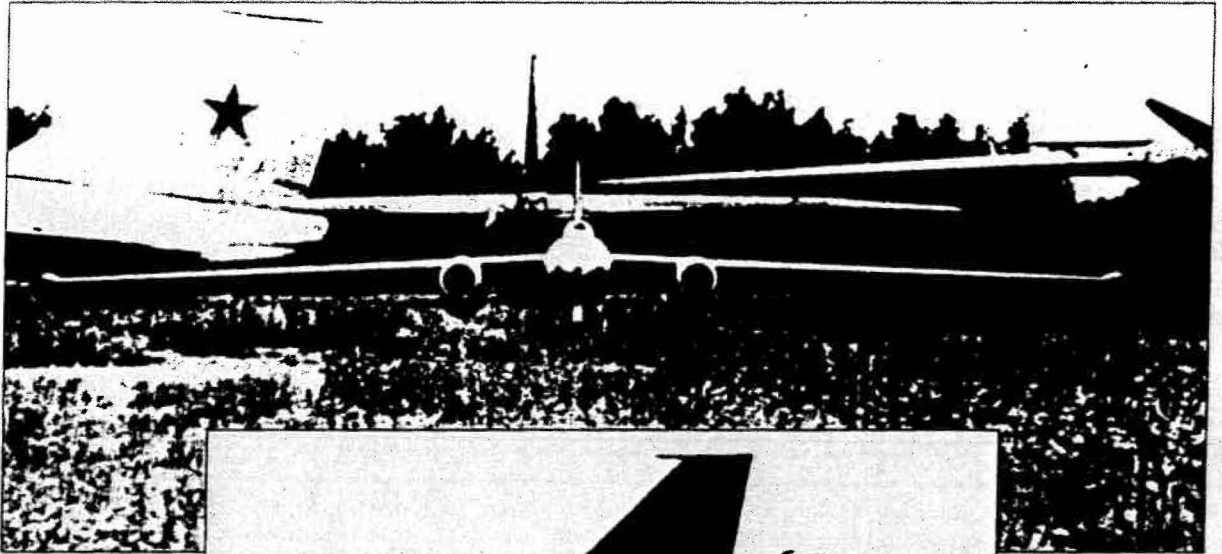
~~Secret~~



Soviet MiG-21 interceptor (top),
Soviet MiG-19 interceptor
(middle), Soviet MiG-19
photographed by a U-2,
13 October 1957 (bottom)



Secret NOFORN



*YAK-25RD Mandrake on display at the Gagarin Military Academy Museum (top and middle)
U-2 in the new black paint scheme (left)*

~~Secret NOFORN~~

~~Secret NOFORN~~

Chapter 3

152

Force of 31—with the more powerful Pratt & Whitney J75-P13 jet engine. This new power plant generated 4,200 pounds more thrust while adding only 2,050 pounds more weight. With its greater power, the engine permitted the U-2 to reach operational altitude more quickly, thereby reducing the telltale contrails that the U-2 produced as it passed through the tropopause at 45,000 to 55,000 feet. With the new engine, U-2 passed through this portion of the atmosphere faster and did so before entering hostile airspace, thus reducing the chance of visual detection. The J75 power plant also made it possible for the U-2 to carry a larger payload and gain another 2,500 feet in altitude, permitting it to cruise at 74,600 feet. The new engines were in very short supply because of the needs of the Air Force's F-105 construction program, but Colonel Geary used his Air Force contacts to obtain an initial supply of 12 engines. The Air Force never equipped its original U-2s with the J75 engines.¹⁰⁶

Detachment C in Japan received the first of these re-engined aircraft, known as U-2Cs, in July 1959, and two more arrived in Turkey for Detachment B in August. All Agency U-2s had the new engines by the summer of 1962, but by then only seven CIA U-2s remained in service.

INTERVENTION IN LEBANON, 1958

Although the U-2 was used less and less for its original role of gathering strategic intelligence on the Soviet Bloc, it had acquired the new mission of providing US decisionmakers with up-to-date information on crisis situations all around the world. The first use of the U-2 to gather tactical intelligence occurred during the 1956 Suez Crisis. Afterward, U-2s from the Turkish-based Detachment B conducted periodic overflights to monitor the situation in the troubled Middle East, and they became especially active during the summer of 1958.

On 15 July 1958, President Eisenhower ordered US troops to land in Lebanon in response to a request for assistance by Lebanese President Camille Chamoun. Three months earlier, Eisenhower had turned down a similar request because the rioting that had led President Chamoun to ask for American aid had died down before intervention became necessary. In July, however, President Eisenhower saw the overall situation in the Middle East as much more threatening. On 14 July forces aligned toward Egyptian President Gamal

¹⁰⁶ *OSA History*, chap. 16, p. 8 (TS Codeword); Geary interview (S).

~~Secret~~

~~Secret NOFORN~~

Chapter 9

153

Abdel Nasser overthrew the Government of Iraq and assassinated the royal family. Long concerned by the growing influence of Nasser, who had close ties to the Soviet Union and now headed both Egypt and Syria in the new United Arab Republic, President Eisenhower decided that US intervention was necessary to stabilize the situation in Lebanon and to show Nasser that the United States was willing to use force to defend its vital interests in the region. Before intervening in Lebanon, the United States consulted with the United Kingdom, which also decided to intervene in the Middle East by sending paratroopers to assist the Government of Jordan on 17 July.

With US Marines and Army troops deployed in a potentially hostile situation in Lebanon, US military commanders and intelligence community analysts immediately requested tactical reconnaissance flights to look for threats to the US units and evidence that other Middle Eastern countries or the Soviet Union might be preparing to intervene. The U-2s of Detachment B in Turkey carried out these missions.

Because tactical reconnaissance required an immediate readout of the films taken, the Photographic Intelligence Center (the new name for the Photo-Intelligence Division from August 1958) quickly reopened the film-developing unit at Adana and staffed it with lab technicians and photointerpreters. Throughout the summer of 1958, Detachment B U-2s brought back photography of military camps, airfields, and ports of those Mediterranean countries receiving Soviet arms. The detachment also kept a close watch on Egyptian-based Soviet submarines, which posed a threat to US 6th Fleet ships in the Mediterranean. In addition, U-2s flew occasional electronic intelligence collection missions along the Soviet border and over the Black Sea without entering Soviet airspace. In late August, as the crisis in the Middle East eased, the United States began withdrawing its 14,300 troops. It was not until 25 October, however, that the last American soldier left Lebanon.¹⁰⁷

BRITISH PARTICIPATION IN THE U-2 PROJECT

Shortly after the withdrawal of US troops from Lebanon, a new group of pilots joined the U-2 project. In November 1958, four RAF officers arrived at Detachment B at Adana, thus beginning the United Kingdom's participation in U-2 operations. The British had first

¹⁰⁷ Ambrose, *Eisenhower: The President*, pp. 462-473

~~Secret~~

~~Secret NOFORN~~

Chapter 3

154

become involved in the U-2 project in September 1956, when the United States supplied them with photography from U-2 missions. To handle U-2 material, the British created a new control system, which later merged with the US control system. By 1957 cooperation between the United Kingdom and the United States had expanded to include frequent consultation between the requirements and photo-interpretation organizations of both countries. James Reber and Arthur Lundahl made periodic trips to the United Kingdom for discussions with Alan Crick's UK Requirements Committee (generally known as the Crick Committee, later as the Joint Priorities Committee), the Joint Intelligence Committee, the Joint Air Reconnaissance Intelligence Center, and MI-6.¹⁰⁸

The idea of using British pilots in the U-2 program first arose in the spring of 1957, when Richard Bissell—upset that his aircraft had not been allowed to fly over the Soviet Union since the December 1956 standdown—was searching for ways to reduce the political risks of overflights and thus obtain more frequent authorization for missions over the Soviet Union. One of his proposals was to use non-US pilots—possibly British—to increase the possibility of plausible denial in the event of a loss. At a meeting with key CIA, Defense Department, and State Department officials on 6 May 1957, President Eisenhower approved the concept of British participation in the U-2 project.¹⁰⁹

During the next six months, Dulles and Bissell met with Sir Dick White, head of MI-6, and Air Vice Marshal William M. L. MacDonald, Assistant Chief of the Air Staff for Intelligence, on several occasions to discuss the proposal in general terms. At first the CIA did not push the proposal too hard because at the same meeting in which he approved British participation, President Eisenhower had consented to the resumption of U-2 missions over the Soviet Union, resulting in 10 overflights during the summer and early fall of 1957. But when flights ceased in October, the thought of British participation became more attractive. By early 1958, Bissell was pressing the British to begin training pilots in the U-2 even though no final political decision on their participation had been made. On 7 February 1958, Bissell instructed the [redacted] to ask Air Vice Marshal MacDonald if the RAF was prepared to

¹⁰⁸ See, for example, the trip reports of the Ad Hoc Requirements Committee in the COMIREX records, IC Staff (TS Codeword).

¹⁰⁹ Andrew J. Goodpaster, Memorandum of Conference with the President, 6 May 1957 (TS); idem, "Record of Action—Meeting of May 6, 1957," WHOSS, Alpha, DDEL (TS).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

155

select a group of pilots for the U-2 project. MacDonald agreed to Bissell's proposal and began recruiting RAF pilots to fly the U-2.¹¹⁰

In June 1958, representatives from the British Air Ministry came to project headquarters for an orientation and then sat down with CIA officials to work out an agreement on plans and procedures for the joint project. The two sides decided to establish a small RAF contingent that would be integrated into and supported by Detachment B at Adana. The British missions would be operationally controlled by CIA project headquarters. Soon afterward four British pilots began training in Texas. One of these pilots, Squadron Leader Christopher H. Walker, died in a training accident in July 1958. Because of the addition of RAF officers to the program, Project AQUATONE received a new codename, CHALICE. By the end of November 1958, three RAF pilots and a flight surgeon joined Detachment B at Adana with Turkish approval.

Formal approval by the political leaders of the United Kingdom and the United States had come several months earlier. On 27 August 1958, Prime Minister Harold Macmillan gave his approval to British participation in the project as long as he had the right to approve or disapprove all operational flights by RAF pilots. On the same day, President Eisenhower gave his approval in principle for the joint project.¹¹¹

Both sides stood to gain from the joint nature of the U-2 project. For Richard Bissell, British participation was a means to gain an additional source of authorization for overflights of the Soviet Union. Six months earlier, Bissell had cabled to [redacted] that he wanted British participation because it would "facilitate operations by them at times or under circumstances beyond the scope of authority accorded by US political authorities."¹¹²

President Eisenhower viewed British participation as a way to confuse the Soviets as to the sponsorship of particular overflights and also to spread the risk in the event of a loss. Furthermore, he was used

¹¹⁰ *OSA History*, chap. 13, pp. 1-2 (TS Codeword).

¹¹¹ *Ibid.*, pp. 5-6 (TS Codeword).

¹¹² *Ibid.*, p. 1 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 3

156

to working closely with the British from his wartime experience and believed that their involvement in the U-2 program was a natural aspect of their alliance with the United States.¹¹³

On the British side, participation in U-2 flights was a logical extension of the close cooperation that already existed between the two countries on the U-2 program. The direct involvement of the British also enabled them to conduct additional flights in areas such as the Middle East that were of more intelligence interest to the United Kingdom than to the United States. The British also may have reasoned that direct participation in the program was the best way to ensure that they had a right to share in the U-2's take. Otherwise, the United States might decide at some point to cut off the flow of U-2 photography, as it had done during the 1956 Suez Crisis.

By November 1958, British pilots had joined Detachment B, and arrangements had been made for the title to the aircraft they would be using to be transferred on paper to the British Government. In a final exchange of letters between President Eisenhower and Prime Minister Macmillan in December, the President summarized the lines of authority for the joint program: "British missions are carried out on your authority and are your responsibility just as our activities are authorized and controlled here in accordance with the procedures I have established. In this sense, it could be said that we are carrying out two complementary programs rather than a joint one."¹¹⁴

Richard Bissell had achieved his goal of gaining another source of approval for overflights of the Soviet Union. In late 1959 and early 1960, this arrangement proved its value when British pilots conducted two highly successful missions over Soviet missile testing facilities at a time when President Eisenhower had not authorized an overflight for almost six months (see chapter 4). Most flights by the RAF pilots in Detachment B, however, took place in the Middle East, where the United Kingdom carried out 27 missions during the two years its pilots took part in overflights.

In Britain, the cover story for the RAF participation in the U-2 program was that British fliers were being trained to fly high-altitude weather-sampling missions for the RAF weather service. To support this cover, a U-2 was ferried to Watton RAF Base, England, in early

¹¹³ Goodpaster interview (S).

¹¹⁴ *OSA History*, chap. 13, pp. 10-11 (TS Codeword).

~~Secret~~

~~Secret NOFORN~~

Chapter 9

157

May 1959, and used to fly weather missions on 7 and 8 May before returning to Adana. Two more weather-sampling flights took place over England on 5 and 6 October 1959.

THE U-2 PROJECT AT THE BEGINNING OF 1959

Early 1959 saw Detachment B aircraft active primarily over Middle Eastern countries, with occasional overflights of Albania to check for reported Soviet missile installations. Detachment C mainly collected high-altitude weather data, although it also flew two missions over Tibet and Southwest China (see chapter 5). The overflight program against the Soviet Union seemed to be at a standstill, but pressures within the government were building to resume deep-penetration flights to resolve the growing "missile-gap" controversy.

Organizationally, the U-2 project underwent a major change after Richard Bissell became CIA's Deputy Director for Plans on 1 January 1959. At first glance, Bissell's selection seems unusual because he had spent most of his Agency career heading the U-2 project, but his first major assignment had been coordinating support for the operation that overthrew the leftist Government of Guatemala in 1954. Furthermore, Bissell's U-2 project was the major covert collector of intelligence against the CIA's primary target, the Soviet Union.

During his years as head of the Development Projects Staff (DPS), Bissell had opposed proposals to bring all Agency air activities together into a single office, fearing that he would lose control of the U-2 project. Once he became Deputy Director for Plans, his viewpoint changed; he was now in a position to consolidate all air activities under his own control. On 16 February 1959, the DPS became the Development Projects Division (DPD) of the Directorate of Plans (at the time known as the Deputy Directorate/Plans or DDP). Despite the tremendous increase in the scope of his duties after assuming control of the DDP, Bissell retained personal control of his previous Development Projects Staff projects: the U-2 program, another project to develop a photosatellite, and a third project to design a follow-on aircraft for the U-2 (OXCART). Although the amalgamation of all Agency air operations and the transfer of the U-2 project to the DDP made sense, the question remained as to whether one individual could effectively control all these different activities.

~~Secret~~

Blank