

To: John Warner

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D/SA P/B

BYE-2238-67
21 March 1967
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SUBJECT: Comparison of the Capabilities, Performance, Countermeasures Systems and Operational Status of the A-12 and SR-71

1. The purpose of this memorandum is to show the contrast between the capabilities, performance, countermeasures systems, and operational status of the A-12 and SR-71 aircraft.

2. General:

a. The A-12 is a single seat reconnaissance aircraft designed for high altitude, high speed covert reconnaissance by the CIA of denied territory during peacetime.

b. The SR-71 is a two place, high speed, high altitude reconnaissance aircraft designed primarily for military post-strike reconnaissance of selected targets as part of the SAC EWP (Emergency War Plan).

c. The SR-71, fully loaded with fuel at 136,700 lbs., is approximately 12,000 lbs. heavier than the A-12. About 9,000 lbs. of this excess is fuel.

3. Capabilities:

a. The A-12 is designed to utilize as options, one of three different types of high resolution cameras, [redacted] [redacted] The highest resolution camera provides a [redacted] sixty-three (63) n. m. wide continuous swath of one-foot resolution.

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BYE-2238-67
Page 2

b. The SR-71 has a simultaneous capability for photography, ELINT, [redacted] Its photography is one-foot resolution but it is in two separated five-mile swath width strips. These five-mile strips may be positioned up to 19.5 miles on either side of the aircraft.

c. The basic reason for the difference in capability of the SR-71 and A-12 is a design function. The A-12 was designed to operate against selected peacetime targets either photographically or electronically. The selected equipment option could and is, therefore, optimized. The SR-71 was designed primarily for post-strike reconnaissance with emphasis on multi-sensor collection.

4. Performance:

a. The A-12 has repeatedly demonstrated an operational mission profile at Mach 3.1 cruise speed at an altitude up to 84,500 feet with an unrefueled range of approximately 2600 to 2700 nautical miles, dependent upon fuel reserves. Statistically, the A-12, as of the end of CY 1966, has accumulated 604 sorties (332 hours) at Mach 3 cruise speed of which 84% (280 hours) was accumulated on operational aircraft. Mach 3 speed has been maintained for three hours and fifty minutes; Mach 3.2 for three hours and thirty minutes, interrupted only by the brief interspersing of required aerial refuelings. Twenty-four sorties have been flown involving three or more aerial refuelings. Over a nine-month carefully rated period during the operational validation testing, all systems operated satisfactorily on 87% of sorties flown. This performance rate compares most favorably with the demonstrated capabilities of USAF high-performance aircraft (such as the B-58) in a similar operational period.

b. The data concerning the SR-71 flight experience to date is not available to us. However, eventually the ranges of the A-12 and SR-71 may be comparable, but because of gross weight differences, the A-12 normally will be able to fly at 3,000 to 4,000 feet higher altitude.

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BYE-2238-67

Page 3

5. Electronic Countermeasures System:

a. The A-12 is presently equipped with the most sophisticated state-of-the-art specially developed electronic countermeasures (ECM) systems available.

b. A special ECM system designed specifically for the SR-71 is under development and it is our understanding that the Initial Operational Capability date is approximately one year from now. The Air Force, however, has an option to install an interim ECM system of lesser sophistication before that date.

6. Operational Status:

a. The A-12 program at the present time has six operationally ready Mach 3+ aircraft with complete tanker rendezvous equipment, eleven high resolution cameras and seven sets of sophisticated electronic countermeasures systems. This proven capability has been available since December, 1965. Two contingency operational plans, practiced and tested, have been formulated to provide both Cuban and Southeast Asian reconnaissance contingency coverage by the A-12. A constant state of readiness is being maintained at Kadena Air Base, Okinawa, for either or both of these requirements.

b. The USAF Strategic Air Command is estimating that the SR-71 will be operationally ready in July 1967 to provide a contingency capability for Cuban coverage, if required, and Southeast Asia during the October - December period of 1967. This Office does not have sufficient information to either question or affirm the validity of this estimate. Currently, the SR-71 purposefully is doing a minimum of flying above Mach 3 due to some tank sealant problems. However, the program is being geared to get the entire system ready to assume the contingency capabilities noted above.

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BYE-2238-67

Page 4

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