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OXC-6026-63

A-12 BACKGROUND PAPER

When the U-2 program became operational in 1956 it was generally assumed that the life expectancy of the program would be approximately two years. Although the viability of the U-2 program far exceeded our expectations, recognition of the lead time required to bring into operational existence a follow-on aircraft prompted at that time studies looking toward the development and production of an aircraft of greatly improved performance characteristics.

With the sanction of the President's Foreign Intelligence Advisory Board, the Central Intelligence Agency undertook a review of all military aerial reconnaissance projects in being or in study. This included the ideas and proposals of a diverse group of aircraft and missile manufacturing concerns.

Early in 1959 interest had narrowed to a supersonic, high altitude unstaged design by Lockheed Aircraft Corporation and a version of the Convair "Super-Hustler" design proposal parasited to the B-58 aircraft. In the summer of 1959, with the reduction in the B-58 program by the Air Force, and particularly in view of the extreme logistics problems posed by parasiting to that aircraft, interest in the "Super-Hustler" configuration terminated. Both Lockheed and Convair immediately thereafter undertook new design studies. These designs were of unstaged vehicles and differed only in external configuration. Size, weight and aerodynamic performance were nearly identical.

In August of 1959, after coordination and agreement of the highest officials in the Department of Defense and the Air Force, the CIA proposed to the President that the Lockheed design be selected and his approval for the initial development was obtained. Both Lockheed and Convair had previously investigated the use of the J-93 engine and both had concluded that use of this engine would not provide the same high cruise altitudes that could be reached by using the Pratt & Whitney built J-58. The latter was chosen to power the aircraft which had now been designated the A-12.

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The designer of the A-12 was Mr. C. L. (Kelly) Johnson, a vice-president of Lockheed who also designed and built the F-104 and the U-2. It was decided that the same streamlined development and production techniques utilized in building the U-2 would be employed in this program.

In pursuance of this philosophy it was further determined that it would be desirable to adopt the sole source procurement technique for those components, systems or subsystems, whose performance, configuration, characteristics, materials, major expense, or specifications could be assumed to be indicative of the existence of a major effort in the field of manned propelled supersonic flight, provided that reasonable and prudent care be exercised by all concerned, not only in the initial selection of a source but in all managerial and substantive areas possible. Limited competitive bidding was permitted whenever it did not interfere with the execution of the basic mission. These procedures were identical to those so successfully employed in the development of the U-2, and from the standpoint of security and compression of time from the design phase to production proved again to be unparalleled in the history of standard aircraft procurement.

The time-saving accomplished through these techniques can be better appreciated if a comparison is made of elapsed time between major milestones in the A-12 development program as opposed to the B-58 and B-70 programs.

For example, in the A-12 program 26 months of preliminary design studies involving various aircraft configurations were expended prior to contractual "go ahead". Twenty-nine months were required from "go ahead" to first aircraft completion (rollout), 31 months to first flight, 37 months to first MACH 2 flight, and 46 months to first MACH 3 flight.

By comparison, in the B-58 program 32 months were devoted to design studies, 50 months were required from "go ahead" to rollout, 51 months to first flight and 59 months to first MACH 2 flight.

In the case of the B-70, 38 months were consumed by design studies and 68 months have now elapsed since "go ahead". The B-70 has been beset by various technical problems and first aircraft completion now is not anticipated until late in 1963 or early 1964.

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Both in the assignment of military personnel and the recruitment and selection of the pilots, techniques and ground rules which were found to be effective in the U-2 program have been employed.

In October of 1960, the Air Force, using CIA as its procurement agent, contracted for three aircraft of a two-place, long-range interceptor version of the A-12, which was designated the AF-12. This version includes the Hughes manufactured GAR-9 missile and ASG-18 radar guidance system. The principal aircraft changes involve the cockpit area and redesign of the fuselage nose to accommodate the radar.

In January of 1963 the Secretary of Defense approved purchase of six additional aircraft for Air Force use as a general purpose reconnaissance vehicle configured to carry a variety of systems packages. Subsequently, in August of 1963, the Secretary of Defense approved an additional procurement of 25 aircraft of this configuration which was designated the R-12. Again, CIA performed as the procurement agent.

It should be noted that in January of 1961 the then President-Elect reviewed the entire program and upon his assumption of office endorsed its continuance under the same rigid security provisions employed to that point.

The A-12, which is constructed almost entirely of titanium operates in the MACH 3 regime. It is 99 feet in length and has a wing span of 59 feet. Its two Pratt & Whitney engines each develop a thrust of 32,500 pounds. Range is 4,000 nautical miles without aerial refueling and altitude capability is in excess of 90,000 feet.

The aircraft are constructed within a special security area at Lockheed's Burbank, California plant and flight testing is being conducted

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The first A-12 aircraft was delivered to [REDACTED] on 25 February 1962 and the first flight was accomplished on the 26th of April 1962. Since that date, there have been a total of ten A-12 aircraft delivered to [REDACTED] of which eight are in flying

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status. A total of 15 A-12's have been ordered, the last two of which will be configured as drone versions of the basic vehicle. The first flight of the A-12 was flown with two J-75 engines installed and the first flight with two J-58 engines installed was accomplished on 15 January 1963. The MACH 3 flight regime was reached on 20 July 1963. On 24 May 1963, the program sustained its first loss of an aircraft when an A-12 crashed approximately 20 miles south of Wendover, Utah. In accordance with a contingency plan previously prepared,

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[redacted]
[redacted] The pilot of the A-12 ejected successfully and was uninjured.

To date the A-12 program has cost approximately [redacted] dollars. From the inception of the project certain key members of Congress have been kept informed of the objectives and progress of the program.

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