ANNUAL HISTORY

1 Jul 1969 - 30 June 1970

VOL I – VOL II

Item 9 - Cockpit instrumentation of School aircraft is obsolete relative to line operational aircraft.

Item 10 - An NF-104 system engineering study has not been accomplished.

Status: Relief from this recommendation was based on the recommendation from Aeronautical Systems Division that the study not be performed.

Item 12 - The addition of angle of attack indexer lights to the F/NF-104 cockpit presentation would enhance safety during performance of the zoom and low L/D maneuvers.

Status: Relief from compliance was requested and Aeronautical Systems Division agreed that the modification would not be recommended.

As of 1 July 1969, there were eight approved tasks, or projects, for updating technical facilities and capabilities of the Aerospace Research Pilot School. Some of these projects were to be realized during this period, some were a bit rearer realization, and some were abandoned as no longer necessary or required. The projects and their status as of 30 June 1970 are discussed below:[9]

1. T-27 Space Flight Simulator

Status: A formal directive was received from Air Force Systems Command during July 1969 requiring deactivation of the T-27 Space Flight Simulator due to the cancellation of the MOL (manned orbiting laboratory) program and reduction of the Air Force man-in-space mission. As a result of this directive, the simulator was placed in a "flyable storage" configuration 31 August 1969, and contractural maintenance was discontinued. Class 69-A did

not receive training in the T-27 Space Flight

2. NF-106B Variable Stability Trainer (VST)

Status: The NF-106B aircraft with the variable stability system, flew four missions during July 1969 for a total of 5.3 hours, three hours of this time were variable stability flight time. By early November, this NF-106B aircraft had flown 23.5 additional hours of which 9.4 hours were variable stability time. Shortly before aircraft #2529 departed for IRAN (inspect and repair as necessary), 4 November, at McClellan AFB, California, the second NF-106B received the VST modification. This NF-106B aircraft, flew a successful functional check flight 7 November. With the two NF-106B aircraft modified as a variable stability trainer and operating successfully, this project was considered completed.

3. F-104C/D Zoom Modification

Status: A Class 1-B modification (to become a Class IV-B modification within six months) was approved 25 March 1970. This modification increased the zoom battery voltage from 24 VDC (volts direct current) to 28 VDC. The voltage level of the 24 volt battery dropped two volts immediately upon current draw, and the instrument inverter would not function properly on less than 24 volts. This modification was to be accomplished locally on all F-104C/D zoom aircraft.

4. F-104D Side Stick Control System

Status: During evaluation flights in April of 1969, following installation of the side stick control system (SSCS) in two F-104D aircraft, a safety flight discrepency was discovered. The pilot was given inadequate warning when the SSCS became disengaged. A contractor supplied disengage warning feature was delivered to the Center 31 July 1969 and installation

on F-104D was made 5 August, and on F-104D August 8.

Following installation of the disengage warning feature, both aircraft were successfully flown for various landing patterns. It was not until April 1970 that the final acceptance flights were flown. The side stick control system was rated excellent, however, two minor engineering changes were recommended; 1) a stainless steel sleeve to correct a by-metal expansion problem; and 2) a new needle valve to limit the system damping ratio in order to prevent rupture of hydraulic seals. The stainless steel sleeves were manufactured locally and installed. The manufacture and installation of the needle valve was in the process of being contracted for.

5. V/STOL Trainer

Status: This requirement remained open and the Required Operational Capability (ROC) was being held pending an improved funding program.

6. Lifting Body Trainer

Status: The requirement for a lifting body trainer remained open and was being reevaluated as the result of cancellation of the MOL program and elimination of the Air Force man-in-space mission.

7. T-38 Variable Dynamics Trainer

Status: The requirement for this Class V modification continued to exist, however, the lack of funds and the School's inability to release T-38 aircraft for the modification stymied the project.

8. Universal Aircraft Flight Simulator

Status: The study for this project was completed as of 30 June 1970, and the report was due 1 October 1970. Further progress depended upon fiscal year 1972 Air Force funding. The MCP (military construction program) for the simulator building was approved for fiscal year 1973.