

412TW-PA-21187



Sonobuoy Missile Impact Location System
(SMILS)

4950th Test Wing

AIR FORCE TEST CENTER
EDWARDS AFB, CA

Ca. 1990's

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EDWARDS AIR FORCE BASE, CALIFORNIA
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REPORT DOCUMENTATION PAGE

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Experimental Flight Test Division

4950TH TEST WING

Workload	Test Program Manager (TPM) <ul style="list-style-type: none">- approx. two dozen test projects
	Test Team Members <ul style="list-style-type: none">- approx. one dozen test projects
	Other Efforts <ul style="list-style-type: none">- I&M support : SMILS/CMMCA/ARTB- eng. support to Product Divisions<ul style="list-style-type: none">- - 2 or 3 taskings per year- MSTIRC; Reliance; PATS; etc.<ul style="list-style-type: none">- - 3 individuals part-time- Move-West efforts<ul style="list-style-type: none">- - 1 full time, 4-5 part-time- TW and 2-Ltr staff work<ul style="list-style-type: none">- - 2-3 part-time

COURSE OF ACTION

4950th Test Wing

HQ AFMC/DOO/LGM BUDGET DRILL, 23 NOVEMBER 1993

A. 4950TH TEST WING FY94 PROGRAMMED DEPOT MAINTENANCE (PDM)

AIRCRAFT M/D/S	SERIAL NUMBER	PDM ENTRY	ADDITIONAL CAPABILITY
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ADVANCED RANGE INSTRUMENTATION AIRCRAFT (ARIA)

- | | | | |
|------------|---------|-----------|---|
| 1. EC-135E | 61-0326 | 24 Jan 94 | CMMCA Phase 0 |
| 2. EC-18B | 81-0892 | 31 Jan 94 | SMILS, Horn Antenna,
ARIA Optics, SP-25 Optics |

ADVANCED RADAR TESTBED (ARTB)

- | | | | |
|------------|---------|-----------|---|
| 3. NC-141A | 61-2779 | 15 Mar 94 | Avionics testing, High-speed
recording, Inflight analysis
of data |
|------------|---------|-----------|---|

B. ACTIONS

1. Continue the PDM schedules for ARIA EC-18B/81-0892 or ARTB NC-141A/61-2779.
2. Delay PDM of ARIA EC-135E/61-0326 from FY94 until FY95.
3. Cancel pre-PDM removal (PDMR) of mission equipment from -326. Work was to be done by the Developmental Manufacturing and Modification Center (DMMF) (ASC/AM).
4. Perform immediately a PDM extension inspection on -326 to delay by one year PDM entry.
5. Use programmed FY95 PDM money for C-135C/63-8050 to pay for PDM on -326 in FY95.
6. Use programmed FY96 PDM money for NKC-135A/55-3128 to pay for PDM on -8050 in FY96.
7. Address the long-term ownership/usefulness/supportability of -3128 in the near future.

Col Steck//4950TW/DO//DSN787-7287//mkt//30 Nov 93

PCA FINDINGS:

C-18B/81-0891

- 12 Placards corrected.
- 2 items on Chart A need to be corrected.
- 7 discrepancies between TUs and aircraft (Item missing from aircraft or blank panel difference)

C-18B/81-0892

- Flight Test circuit breaker panel has 19 discrepancies between aircraft and drawing labels
- 6 mods on Temporary Release to update documentation. WP plans to complete prior to transfer.

C-18B/81-0894

- SMILS mothballed. Mod on Temporary Release until decision made regarding program.
 - Discrepancies need correcting before flying the SMILS program.
- Placards corrected on the spot.
- Racks were documented.
 - Need to rely on TU for current configuration.
 - Some drawings had obsolete configurations still depicted.
 - Effectivity block missing on 41% of the installation drawings.

C-18B/81-0896

- 26 Placards corrected.
- 11 items on Chart A need to be corrected.
- External mods need mod number stenciled.

C-135E/60-374

- Unauthorized modifications
 - Goose neck work light.
 - Coax connector box (Station 580)
- X-Band removal not documented.
- Weight and Balance and placards corrected.
- 32 drawings not found on Engineering Data Record. EDR needs updating.

C-135E/61-0329

- Chart A and placards/labels were corrected.

C-135E/60-372

- Missing 45 pages of 781 forms from PCI report dated 19 Sep 91.
 - No record of what discrepancies were cleared.
- Discrepancies between drawings and aircraft
 - See PCA reports for specifics and numbers found
 - 60 or 400 Hz receptacles not clearly labeled
 - Mounting screws too short
 - Items missing from drawing or aircraft
- Open TRFs that expire 16 Apr 94
 - Composite window has hours restriction pending further engineering
 - MILSTAR upgrade
- Consoles and racks hard wired to aircraft.

C-135E/60-375

- Minor documentation clean up in progress.
- Still waiting on stress analysis to be completed.

C-135C/63-8050

- Cargo floor restriction.

NKC-135/55-3128

- 12 weight and balance discrepancies corrected.
- 14 drawing discrepancies need to be corrected.
- No documentation of the bleed air system from the engines to the wing roots.

(KGR-66) to the current modification that we are doing for the Titan IV/Centaur program. By adding a different input decryption device (KGR-66) to the configuration, ARIA will be able to meet WTR security requirements. We recommended that SSD also fund the complete modification of two extra aircraft (S/N 326 and 374) to allow for maximum scheduling flexibility. Design, fabrication, and modification can be accomplished in parallel with the Titan IV/ Centaur modification. This also gives the ARIA a standard configuration throughout the fleet.

As a result of the 6 November meeting, a letter (4950 TESTW/FFE ltr, 27 Nov 89) was sent to WTR/DOF outlining how we could provide support for encrypted Titan IV booster data in the form of a draft PID and the ROM cost and schedule outline in the ARIA Titan IV modification briefing. We are currently waiting for a response from SSD in the form of a PID.

DSCS III Satellite Communications Terminal Study, 921AF3FF: A study was initiated with WRDC/AAAI to determine a feasible cost-effective approach for incorporation of an airborne SHF SATCOM terminal on the ARIA.

Sonobuoy Missile Impact Location System (SMILS), 810004QA: The first operational aircraft (EC-18B S/N 894) modification was completed in late December 1989. The modification consisted of installation of the E-Systems launch kit and the 4-bay SMILS rack. The instrumentation (Group B) fabrication was complete by Applied Physics Laboratory (APL) and installation and integration efforts begun. Extensive test planning efforts were initiated, including: Frequency authorizations, Signal, Underwater Sound (SUS) approval, Egabrag scheduling, and obtaining Fleet Numerical Oceanographic Center (FNOC) data, along with draft test plan publication. Efforts were also made to gain user support and to establish interfaces with user and range personnel.

Meteorological Sampling, 810004QA: Testing of Meteorological Systems was accomplished on 23 October and 10 December 1989 with the successful ground launch of 2 sondes and successful launch of 3 Aeromet built ALASS probes from the ARIA. Work is continuing on IOC procurement of ALASS probes and a point paper concerning the issues has been coordinated on by Col Phillips.

ARIA Antenna Scanners, 830001FF: First article testing was completed, including a checkout at WPAFB in the ARIA Operation and Maintenance Training Unit (OMTU). All testing was extremely successful, and production authorization was given. The first group of production units is due to arrive in mid February 1990.

EC-18D Cruise Missile Mission Control Aircraft (CMMCA), 92175FF: Aircraft S/N 893 was delivered in July to Chrysler Technologies Aerospace Systems (CTAS) in Waco, Texas. CDR was held in July at Electrospace Incorporated (ESI) in Richardson, Texas. ESI has been bought out by CTAS, moving program management from Richardson to Waco. The Test Wing has committed to funding the Software Development System, a \$764K option requiring \$756K in January 1990 and \$8K in January 1991.

Concept of Operations
for
Combined 412 TW SATAF & 4950 TW Det 3

The purpose of this combined team is to execute the merger of the 4950 TW into the 412 TW at Edwards AFB. The Edwards Team has requested a representative for the Det from selected 4950 TW three letter organizations who's function will merge. Individuals who PCS into Det 3 will report to the SATAF Director, Lt Col Wayne Lutz. While in the Det they will do classic project management, the projects will revolve around executing the merger for their areas of expertise. As the focus of their efforts shift from merging to operating, the individual will move into the 412 TW gaining organization. If civilians move into the Det, their position and salary will come from the 4950 TW at WPAFB. The actual role a person will play as part of this team will depend on the skills the person brings.

FFT - One of the more challenging tasks will be to move the Data Analysis function to it's new location in bldg. 1409. The building will be constructed starting 8 Jan 93 and will be completed on 31 Jan 94. The function will become a stand alone data analysis organization supporting the 4950th projects in the 453rd TS, and the CMMCA, SMILS, and ARIA projects in the 452 TS. The challenge for this team member will be to transfer the equipment and corporate knowledge with-out adversely affecting the mission.

FFS - The Instrumentation function of the 4950 TW should merge easily with the very similar 412 TW/TSI Instrumentation Division. The difficult part will be picking up the different systems used by the 4950th. The 412 TW makes extensive use of ATIS, the 4950th uses MetraPlex and VME chassis based systems. The Instrumentation team member will work to transfer the assets of the 4950 TW/FFS Division, to insure there are trained people onboard, and to integrate the FFS program support function into 412TW/TSI and Edwards AFB..

FFP - The Systems Support function team member will work closely with both the 412 TW/TSI and 453 TS/EN to move the assets of FFPT into Bldg. 1414 and to help move mission responsibility for all the programs that FFPT supports today to Edwards AFB.

FFX & TACAMA - The Flight Test Engineering and TACAMA functions will be merged into the 453 TS/EN and PM organizations. The team members representing these areas will work merger issues relating to transferring program responsibilities and support to the 453 TS/EN/PM from the 4950 TW/FF and TACAMA organizations, getting trained people into the Squadron in time to assume the mission, and in moving the FFX and TACAMA assets to Edwards AFB.