First In - Last Out

Story of the F-4 Phantom II Wild Weasel

PART II

by Lee R. De Haven

McDonnell F-4G, 69-0286, being flown by the 81st TFS / 52 TFW out of Spangdahlem AB, Germany, on May 26, 1982. (Photo by Hans-Joachim Schroder from the Stephen Miller collection)

[Editor's Note: Part 1 of the Wild Weasel story, covering the early development of surface-to-air missile suppression appeared in AAHS Journal Vol. 55, No. 3, Fall 2010. Part I covered early trials and tactical deployment of F-100s and F-105Gs line aircraft converted to support the Wild Weasel roll. This Part II takes up the story with the McDonnell F-4 Phantom II development as a SAM suppression system.]

Wild Weasel IV

Work commenced on the WWIV EF-4C Phantom II program in January 1966 with the Class 5 Modification Program (No. 1778). This program included the removal of the AIM-7 Sparrow III AAMs from the forward missile wells and replacement with an ECM pod (typically the AN/ALQ-119 Noise and Deception ECM pod); and the installation of the ER-142 ECM receiver. (Anthony Thornborough cites the initial WWIV-A included the special, long-range IR-133.) This rewiring modification limited the EF-4C's ability to carry all available ordnance. There were four 33 TFW Block 23 F-4Cs assigned to the program: 64-0781, 64-0787, 64-0790, and 64-0815. The WWIV program included a planned mid-1966 deployment of four aircraft to the combat theater. However, technical problems (namely the inability to link all of the antennas together) forestalled this deployment until September 1972. WWIV was formalized on June 29, 1966. The Operational Test & Evaluation (OT&E) work was conducted at Nellis AFB where the EF-4Cs were assigned to the 4538 FWS/4525 FWW. At some point in time this training unit was dubbed the "Willie Weasel" college. The 4538 FWS/4525 FWW was replaced in place on October 15, 1969, by the 414 FWS/57 FWW. On October 15, 1971, the 414 FWS passed their inventory of six to 10 F-4C/EF-4Cs to the 66 FWS/57 FWW. One of the limitations discovered during testing was heavy vibration of the panoramic receiver pod mounted in the right rear Sparrow III missile well.

The following is a brief service history for these four aircraft between the years 1966 and 1968:

F-4C 64-0781

- 33 TFW, - ?? (June) 1966. McAir St. Louis plant for modification, ?? through August 1, 1966. Undated Mod.
- 1778F involved internal avionics installation in place of the EW pod in the missile wells. 33 TFW, August 1 through September 2.
- 4525 FWW, Nellis AFB, September 2, 1966, through February 9, 1967. McAir plant for modification.
- 9-27 February, second trip, ?? start date - July 24, 1967.
- 4525 FWW, July 24, 1967 - ??.
- TDY to Ogden AMA depot, Hill AFB, Utah, May 29, - July 11, 1968, (included Mk.7 ejection seat upgrade).

F-4Cs 64-0790 and 64-0815 were two of the first four Phantom IIs converted to EF-4C Wild Weasel IV configuration. 64-0790 is seen here with the 163 TFS/123 TFW at Fort Wayne, Ind., on May 6, 1980. (Photo by Robert Pickett from the Stephen Miller collection) 64-0815 was with the 39 TFTS/35 TFW at George AFB in November 1975. (Photo by Arnold Swanberg from the Stephen Miller collection)

F-4C 64-0787

- 33 TFW, - June 13, 1966. McAir St. Louis plant, June 13 - September 15, 1966. Undated Mod. 1778F involved internal avionics installation in place of the EW pod in the missile wells.
- 33 TFW, September 15-20.
- 4525 FWW, Nellis AFB, September 20, 1966 - ??
- TDY McAir St. Louis, March 31 - June 26, 1967.
- TDY Eglin AFB, June 26 - September 1 and September 11 - November 15, 1967.
- TDY Ogden AMA depot, Hill AFB, April 18 - June 4, 1968, (included Mk.7 ejection seat upgrade).

F-4C 64-0790

- 33 TFW, -June 1, 1966. McAir St. Louis plant, June 1 - August 20, 1966.
- 4520 Combat Crew Training Wing (4520 CCTW), Nellis AFB, August 20-31, 1966. 4525 FWW, Nellis AFB, August 31, 1966 - ??
- TDY McAir St. Louis plant, February 6-22, 1967.
- TDY Ogden AMA depot, Hill AFB, June 26 - October 16, 1968, and December 30, 1968 - ?? (included Mk.7 Ejection seat upgrade).

F-4C 64-0815

- 33 TFW, - March 31, 1966. McAir St. Louis plant, March 31 - June 25, 1966.
- 33 TFW (possible, 1st Air Commando Wing, Eglin AFB), June 25 - July 26, 1966. McAir St. Louis, July 26 - August 18, 1966.
- 4520 CCTW, Nellis AFB, August 18-31, 1966.
- 4525 FWW, Nellis AFB, August 31, 1966 - ??
- TDY McAir St. Louis, February 10-25, 1967.
- TDY Ogden AMA depot, Hill AFB, Utah, March 5 - April 18, 1968, (included Mk.7 ejection seat upgrade).

A McAir reference notes that the effort to manufacture production kits (Mod. 1778B) was unsuccessful. However, this is the Mod. number cited for the subsequent 32 F-4Cs modified to the EF-4C standard at the Ogden AMA depot. Actual conversion of the 32 F-4Cs commenced in November/ December 1968. Over the next year the F-4Cs were drawn from a number of Wings, though mainly from the 4453 CCTW (24 F-4Cs), at Davis-Monthan AFB, Arizona.

EF-4C Block Numbers and Serial Numbers

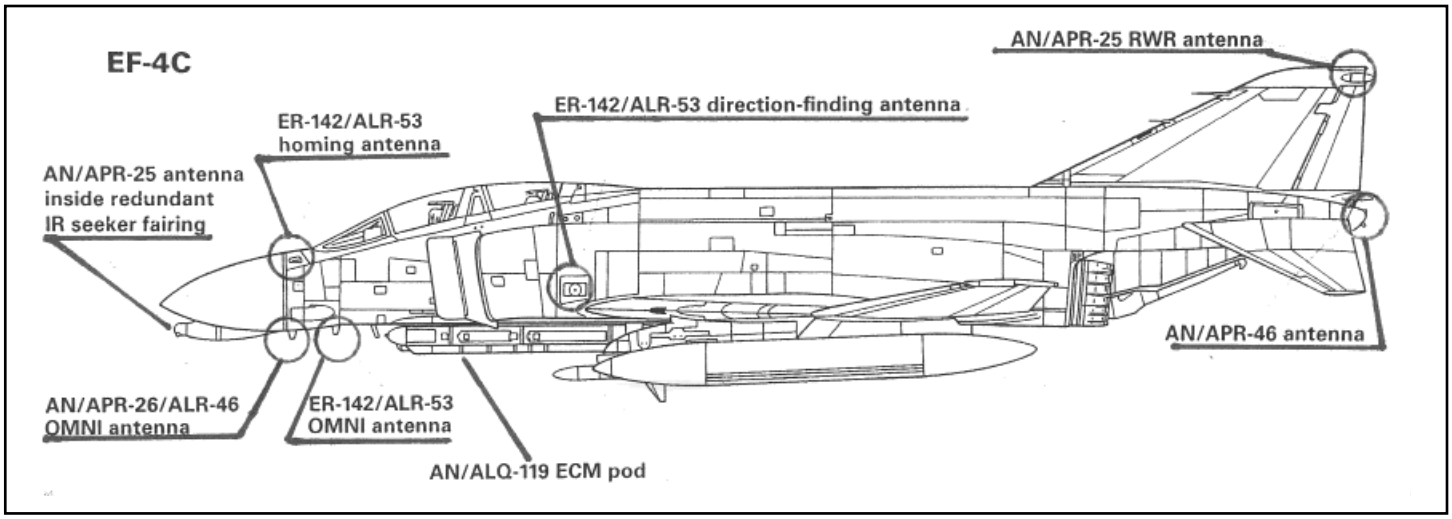
Block No.	Qty	S/N
F-4C-16-MC	(4)	63-7423, 63-7433, 63-7437, 63-7440
F-4C-17-MC	(6)	63-7443, 63-7447, 63-7452, 63-7459, 63-7462, 63-7467
F-4C-18-MC	(7)	63-7470, 63-7474, 63-7478, 63-7481, 63-7508, 63-7512, 63-7513
F-4C-19-MC	(6)	63-7564, 63-7567, 63-7568, 63-7574, 63-7594, 63-7596
F-4C-20-MC	(2)	63-7607, 63-7615
F-4C-22-MC	(1)	64-0675
F-4C-23-MC	(7)	64-0741, 64-0757, 64-0781*, 64-0787*, 64-0790*, 64-0791, 64-0815*
F-4C-24-MC	(3)	64-0840, 64-0844, 64-0847

* Denotes those prototype EF-4Cs

** F-4C 63-7565 was photographed with the nose nodes but is not listed as a confirmed EF-4C

The Physical EF-4C

One needs a very sharp eye to spot the EF-4C from the standard F-4C. When USAF began planning for the Wild Weasel systems integration they ran into the same kind of space limitations inside the F-4 fuselage that the USN experienced with the Project SHOEHORN ECM modifications. Design and redesign to fit equipment was a problem through 1968. The only external indicators to identify the EF-4C were the antennae. By the time the prototypes were being modified for the Wild Weasel role the F-4Cs had the Applied Technology AN/APR-25/26 RWR system in place with small spiral antennas on the front of the empty AAA-4 chin pod and the tail end of the drogue chute door. Three additional antenna blisters were added to the bottom of the forward fuselage and one larger, round antenna was added on the left side fuselage just above the wing leading edge (see diagrams). Differences inside the rear cockpit were



EF-4C antenna locations. (Rich Rentrop illustration)

less common, with some instruments and switches being in different locations.

The USAF implemented a fleet-wide upgrade from the AN/APR-25/26 to the newer AT AN/APR-36/37 RWR. This new RWR provided the backseat Electronic Warfare Officer (EWO) with an improved capability to discretely assess threats. In 1973 the AN/ALR-46 RHAW set replaced the AN/APR-36/37 RWR set and the ER-142 receiver was replaced by the AN/ALR-53 Long Range Homing Receiver. The ALR-46 RHAW provided the threat radar azimuth while the ALR-53 LRHR helped to provide more precise long-range data on the threat radar.

Production Deliveries

The first cadre of EF-4C Wild Weasel aircrews completed the operational conversion course at Nellis AFB in early 1969. The first "production" EF-4Cs were transferred in early 1969 to the 80 TFS/347 TFW, Yokota AB, Japan. In 1971 the 80 TFS transferred the fluctuating inventory of 12 EF-4Cs to the 67 TFS/18 TFW, Kadena AB, Okinawa.

In September 1972 the 67 TFS deployed a detachment of six EF-4Cs to Korat RTAFB, Thailand. This was to be the combat debut as well as the only combat service for the EF-4C model. The EF-4C Wild Weasels directly supported Operation LINEBACKER I and Operation LINEBACKER II. The delay in fielding the EF-4C caused a lag in matching the latest Wild Weasel with the progression in ECM development and the deployment of newer weapon systems. The EF-4C lacked the internal space to house the black boxes for these newer systems, and, in cases the physical parameters interfered with the airframe. This was also the case with the AGM-78 Standard ARM; this missile interfered with the inboard flap and could not be uploaded. Too, a major problem with the EF-4C Wild Weasel/AGM-45 Shrike ARM was that the missile had to be preset for a particular radio frequency, for example, if the preset radio frequency for Mission A was for the Guideline SAM, the Shrike would be ineffective against the 85-mm radio-controlled AAA gun on that particular mission. The result thereafter was McAir and USAF agreeing that the next generation Wild Weasel would use the F-4E model, which had adequate internal space for the newer systems, which were also being reduced in size with the switch from analog to solid state technology. In the meantime, development work continued with/on the prototype Advance Wild Weasel F-4Ds at the factory and Edwards AFB, California.

The second unit to transition to the EF-4C Wild Weasel was assigned to USAF Europe (USAFE). The 81 TFS/50 TFW, Hahn AB, West Germany, took delivery of a fluctuating inventory of 15 EF-4Cs. At least one photograph of an 81 TFS EF-4C reveals a bulk chaff dispensing pod on the right inboard pylon. On July 15, 1971, the 81 TFS was transferred from the 50 TFW to the 86 TFW at Zweibrucken AB, West Germany. On January 15, 1973, the 81 TFS was transferred from the 86 TFW to the 52 TFW at Spangdahlem AB, West Germany.

Aside from the prototypes and the transition training assigned aircraft, the stateside TAC did not have a dedicated EF-4C Wild Weasel unit until 1975. Effective July 31, 1975, the 563 TFTS/35 TFW, George AFB, Calif., took over the Wild Weasel training mission from the 66 FWS/57 FWW. On July 1, 1977, the 39 TFTS was activated to take over the Wild Weasel training mission from the 563 TFTS.

With the coming of the F-4G Wild Weasel model in the late 1970s the days of the EF-4C were numbered. The 67 TFS/18 TFW, Kadena AB, relinquished their EF-4Cs in 1978. The redesignated 39 TFS/35 TFW, George AFB, relinquished their EF-4Cs effective September 20, 1978. This also represented the termination of the training for the EF-4C Wild Weasel model. The 81 TFS/52 TFW, Spangdahlem AB, was the last EF-4C operator, holding onto their aircraft into 1979, at which time the EF-4C was replaced on a one-for-one basis with the newly modified F-4G Wild Weasels.

Following the release from the Wild Weasel role the EF-4Cs were sent to the depots for demodification to the then-current F-4C standard. Thereafter the F-4Cs were assigned primarily to the two squadrons of the Indiana Air National Guard (ANG) for the duration.

F-4D Advanced Wild Weasel

McAir issued internal Job Order 491-2-02 on July 22, 1969. This Job Order was a study of the F-4D Advanced Wild Weasel (AWW) with an eye towards the conversion of 90 F-4Ds to the

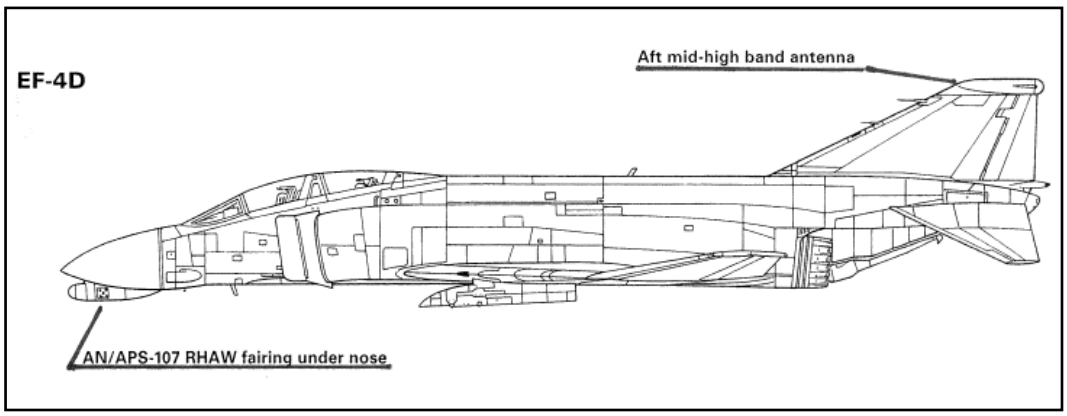
EF-4C 63-7607 while assigned to the 81 TFS / 52 TFW at Greenham Common, U.K., around August 1977. (Photo by Steve Peltz from the Steven Miller collection)

Advanced Wild Weasel role. The program spanned July 22, 1969, through April 15, 1970. McAir's AWW research team investigated full scale antenna/radome pattern testing; data reduction (compression) and analysis; and performed laboratory investigations of several types of cathode ray tube (CRT) contrast enhancement filters (to improve CRT illumination under bright sunlight viewing conditions). There was a trade-off study performed with the AN/ASG-22 Lead Computing Optical Sight System (LCOSS) and a new head-up display (HUD) to ensure optimum selection of a pilot's homing display device. The Wild Weasel Test Team (WWTT) at Nellis AFB was involved in the development (under McAir management) and integration of the new IBM AN/APR-38 Radar Attack and Warning System (RAWS; also described in at least one published account as the Homing and Warning Computer, HAWC). The APR-38A was to provide threat radar azimuth, type, status, range to and precise operating frequency. The contract go-ahead for the Advanced Wild Weasel was included in Job Order 543, spanning December 1, 1970, through September 8, 1974. A mock-up of the APR-38 RAWS was installed in YF-4E 65-0713.

Just as was the case with the EF-4C, the F-4D AWW program suffered from a lack of space. The F-4D airframe was virtually identical to the F-4C airframe. Advances in solid state technology were allowing the avionics components to be shrunk in physical size, which in turn allowed for more components to be added to the overall Wild Weasel electronics suite. Though mostly cited as the IBM AN/APR-38 RAWS, this system was the compilation of the IBM receiver; TI HAWC computer; Loral state-of-the-art cockpit displays and controls; and the GE modified AN/ASG-22 LCOSS. In Anthony M. Thornborough's book *USAF Phantoms, Tactics, Training and Weapons*, an unnamed Wild Weasel project officer noted that one of the space-related problems with the F-4D involved the installation of black boxes in a near inaccessible dead space between the engines. Special air-conditioning ducting had to be added and routed through the near inaccessible area to cool these near inaccessible avionics. Studies were already underway to find a better platform with more room.

In an undated program, two F-4Ds, 65-0657 and 65-0660, were retrofitted to integrate the AN/APS-107 RHAWs with the target acquisition systems from the AGM-78 Standard ARM. Joe Telford, TAWC, was the Project Test Officer for the F-4D IOT&E (AN/APR-107). He points out that the aircraft and aircrews were assigned to the 33 TFW, Eglin AFB. He recounts:

> "I remember several times I had my ass chewed out by the 33rd TFW DO standing before his desk because the testing sometimes prevented him from flying these WW F-4D for normal wing training missions! One time when I was receiving an ass chewing Col. (later Maj. Gen.) J.J. Burns, from the Air Staff at the time, was in the office, too, and he got a big kick out of my situation. (Some things make a lasting impression.)



EF-4D antennae configuration was the same as the EF-4C with the additional components added. (Illustration by Rich Rentrop)

EF-4C 64-0675 without its ECM pod while with the 67 TFS / 18 TFW at Yakota, Japan, on December 5, 1971. (Photo by Hideki Nagakubo from the Stephen Miller collection)

Key personnel:

- Col. Bob Hayden, ASD Program Manager; replaced by
- Col. Ross Rogers, ASD Program Manager
- Lt. Col. Frank O'Donnell, Test Project Officer, Edwards AFB

The first flight of the F-4D AWW prototype occurred on November 27, 1972. With the end of active combat in Southeast Asia, the Wild Weasel program lost some of its urgency. The Wild Weasel program returned to the forefront following the October 1973 Yom Kippur War between Israel and the United Arab Republic (UAR) nations. The Israeli Air Force (IAF) suffered a high number of aircraft losses to the U.S.S.R. SAMs with operating frequencies outside of the U.S. designed ECM pods.

The IBM AN/APR-38 RAWS was procured by the Electronic System Program Office (SPO) within the Aeronautical Systems Division (ASD) at Wright-Patterson AFB, Ohio. Four complete prototype sets were procured from McAir for use in the development program. One source cites one or more Air Force Systems Command (AFSC) assigned F-4Cs with a larger than normal radome blister and large day-glow orange fuselage panels, were involved in this development program.

Two F-4Ds (66-7635 and 66-7647) with the IBM AN/APR-38 RAWS system installed were assigned to the flight test unit(s) at Edwards AFB, California. EF-4D 66-7635 was photographed (McAir Photo No. CI2-2474-5) on April 6, 1973. The formal EF-4D flight test program was flown at Edwards AFB between February and April 1976. When the flight test program ended so did the prospects of the F-4D becoming the next generation Wild Weasel. F-4D 66-7635 had the APR-38 system removed and was subsequently bailed to General Dynamics for radar testing. F-4D 66-7647 likewise had the APR-38 system removed and was returned to front line duty.

A note about the *Wild Weasel* aircrews — they were among the most experienced aircrewmen in TAC, being highly proficient in air combat and flight lead experience. Analysis from the RED FLAG training exercise program revealed that the Wild Weasels were engaged more often than any other aircraft type.

WILD WEASEL
F-4G Phantom II Wild Weasel

McAir and USAF had previously agreed that the next generation Wild Weasel platform (V) would begin with the F-4E model. This early-generation program was often identified as the ADVANCED WILD WEASEL (AWW). By the early 1970s development work had progressed on the avionics as well as the physical modifications to the F-4E airframe. The system selected was the IBM AN/APR-38A Radar Attack and Warning System (RAWS, also identified in some publications as the Homing and Warning Computer, HAWC), which was designed to receive, display, and transmit threat data in the form of CRT displays, digital readouts, advisory/warning lights and aural tones from radar-guided SAM and AAA systems.

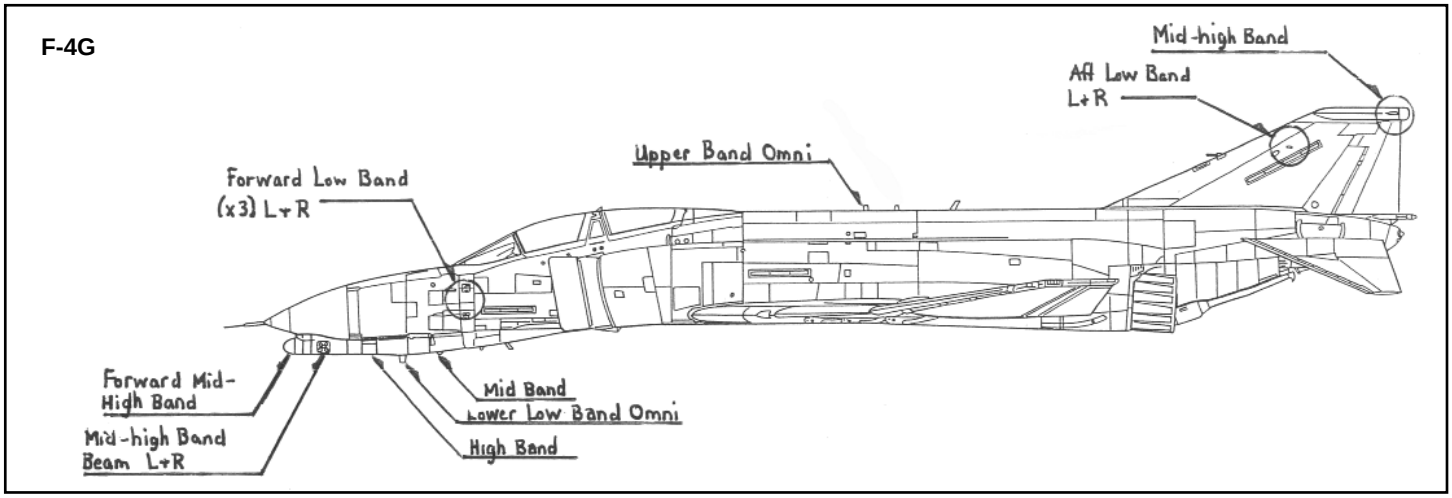


Illustration for the F-4G antennae configuration. (Rich Rentrop illustration)

F-4G 69-0246 while with the 561 FS / 35 FW in April 1995. (Photo by Lionel Paul from the Stephen Miller collection)

Much of the AWW F-4D development work was conducted at Edwards AFB, California. A mock-up of the black box suite was installed in YF-4E 65-0713 (Air Force Flight Test Center). Actual systems flight testing was conducted with two AWW F-4D prototypes (66-7635 and 66-7647) outfitted with the AN/APR-38 RAWS systems. Lt. Col. Frank O'Donnel served as the Test Project Officer at Edwards. These two AWW F-4Ds participated in the F-4G Wild Weasel development program at least until April 1976. During this development work the mix of antenna combinations was tested; ultimately a mix of 52 receiver and emitter antennae was considered the optimum arrangement:

- Eight low-band blade antennae
- Five directional blade antennae (to provide threat bearing inside the rear cockpit)
- Ten, at five per side, small spiral antennae on the sides of the chin pod; these antennae form the distinctive four-leaf clover pattern (receive signals from the beam) within a 9-in/22.9-cm square array and provide range and azimuth data
- Aft-facing beam receiver within the cigar-shaped tail fin cap

McDonnell Douglas was the designated prime systems integration contractor, under which several subcontractors provided and tested the components. The core of the Wild Weasel V program was the IBM AN/APR-38A RAWS. This next-generation RAWS system was capable of identifying, classifying (range/azimuth, operating frequency, type, and status) and tracking an increased number and variety of targets. This system was comprised of components from several sub-contractors:

- Texas Instrument Homing and Warning Computer (HAWC)
- Loral control indicator subsystem (cockpit displays and controls)
- General Electric (modified lead computing system)
- Lear Siegler AN/ARN-101 navigation/attack system
- Tracor AN/ALE-38 chaff/flare dispenser

As is typical with most advancements in electronics technology there were fits with getting individual components to work as claimed and then to work as claimed as part of the overall system. In order to win a share of the contract, individual contractors would claim specific operational data for their components. After the ink dried on the contract the reality all too often involved program delays, financial crises, and threat/counter-threats between the government and industry.

The ordnance package for the Wild Weasel was originally designed around the AGM-45 Shrike ARM missile. By the time the F-4G Wild Weasel model came around the current generation ARM was the AGM-78D Standard (introduced in 1974).

1974 Program Developments

The contract go-ahead for the F-4E (AN/APR-38) Wild Weasel modification program was announced on August 12, 1974, (F-4E AN/APR-38 WW Follow-on R&D, Contract No. F33657-75-C-0017; Job Order: August 12, 1974 - xx xx '78). The new Wild Weasel would likewise carry the 'G' suffix ~ F-4G Wild Weasel. A second contract was let in November: F-4E AN/APR-38 WW Pilot Production Group B, F33657-75-C-P00001; Job Order: Nov. 18, 1974 - end of 1977).

1975 Program Developments

Two contracts received the go-ahead in the first few months of 1975: on March 19 the contract was let for me Wild Weasel AGE Development Program and on May 1 the contract was let for the Wild Weasel AGE Retrofit Program (F-4E AN/APR-38 WW Retrofit (Class V Mod 2740) F42600-75-C-1708-PZ004; Job Order: May 1, 1975 - end of '77). Fiscal Year 1969 F-4Es from Blocks 42 thru 45 were selected for the Wild Weasel program; selection of individual airframes was based upon the fatigue index. (Many of these aircraft had previously been leased to the Royal Australian Air Force and had lower flight hours on the airframes compared to the USAF FY69 F-4Es.)

The following is a brief history of the movements of the F-4G prototype. F-4E 69-7254 was transferred on January 24 from the 57 FWW, Nellis AFB, Nev., to the Ogden ALC, where it remained through May 6. The F-4E was returned to the 57 FWW for about a month and was then bailed to McAir's facility at Edwards AFB, Calif., on June 16. Prior to the program first flights F-4E/F-4G Prototype 69-7254 had its paint scheme modified; the tail fin and outer wing panels were repainted bright orange, to reflect the test platform status. To reflect the temporary ownership, the unit badges on the forward portion of the intakes were replaced with McAir's F-4 Wild Weasel roundel.

Prototype F-4G 69-7254, logged the first Wild Weasel program flight on December 6, 1975. Initial flight tests covered evaluations of the physical changes (primarily to the nose/chin pod) and basic avionics trials. Weapon-related tests/trials included the USN funded AGM-88A High-speed Anti-Radiation Missile (HARM), which oddly, has never acquired a formal name beyond the HARM acronym. Many of the HARM related missions were flown over the USN's Echo Range at Naval Weapons Center, China Lake, California. Echo Range included numerous electronic targets that simulated Soviet ground-air radar-guided weapons systems. Prototype F-4G was returned to the 57 FWW on July 7, 1976, and remained through the end of the year. On January 1, 1977, the prototype F-4G was again bailed to McAir's possession, this time to the

main plant at St. Louis, Missouri. On June 15, 1977, the aircraft was transferred to the Air Force Flight Test Center (AFFTC) at Edwards AFB. On May 12, 1978, prototype F-4G 69-7254 was returned to the Ogden ALC. Formal redesignation to the F-4G type was made effective December 20, 1978.

1976 Program Developments

In January newly promoted Colonel Romstad led the USAF team to the McAir plant for a week-long briefing on the current F-4G modification program.

Following the conclusion of the AWW F-4D program in April 1976 McAir received two key contracts: F-4E AN/APR-38 WW Production AGE Interim Effort BOP F33657-75-A-0012, Order 0006; Internal Job Order issued on June 7, 1976, and F-4E AN/APR-38 WW 25 Kits N00388-75-A-6535; Internal Job Order: July 30, 1976 - Sept. 22, '77, for the first 25 F-4G conversion kits. The conversion process incorporated more than 100 separate TCTOs to the baseline F-4G and a number of additional TCTOs. The kits were to be delivered to USAF Plant 84, at the Ogden Air Logistics Center (OALC) at Hill AFB, Utah. USAF established Project Offices at the McAir plant (AWW Project Officer John Sinnott, Chief Program Engineer) and at Ogden ALC (Project Officer Maj. Terry Romstad and Mr. Neslin Bangerter, Chief Technician). Col. Dudley J. Foster was assigned to the overall Wild Weasel weapon development program at Ogden ALC between April 1975 and October 1977. He later assumed command of the 35 TFW, George AFB, Calif., and was at the controls of the first F-4G to be delivered to TAC. The price tag in then-dollars per conversion was estimated at $2.8 million.

Undated, the systems and Line Replaceable Unit (LRU) test equipment was developed for depot support at the Warner Robins ALC depot, Robins AFB, Georgia.

The next step was the validation phase. F-4E 69-7263 was pulled in April from the 4 TFW fleet at Seymour Johnson AFB, N.C., and sent to the McAir plant for conversion. The aircraft was then delivered on October 20 to the Ogden ALC depot for use in maintenance training of the initial cadre of depot personnel. The conversion line commenced with the arrival on November 12 of the first aircraft. This first "production" conversion was formally redesignated an F-4G effective September 7, 1977. The first and second (69-7290, which also arrived in November, "production" F-4Gs were used for the conversion trials. 69-7263 also served as the validation platform (wherein the depot conducted a paperwork vs. physical airframe comparison) for subsequent changes stemming from the Initial Operational Test & Evaluation (IOT&E) program.

The IOT&E phase included test missions over USAF's newly opened electronic warfare range (Tolicha Range), part of the large target/range complex run by Nellis AFB, Nevada. IOT&E changes included addition/modification to the indicator system for dual fuel quantity; ground speed avionics; and provisioning for the AGM-65D Maverick missile. The IOT&E program was officially completed effective January 1, 1977, but unofficially continued into mid-1978. Go-ahead was given for the first 25 of 116 planned retrofit kits.

1977 Program Developments

The verification phase commenced in January and continued into mid-year. The contract for the next batch of kits was let under the FY77 MOD 2740 WW Follow-on Kits, F42600-77-C-0037; Job Order: September 26, 1977 - early '78.

The production line conversions commenced during the second half of 1977. Each conversion involved on average 160 days of flow time during which 14,420 man-hours were involved. The process began with the F-4E entering Production Line 1, Module A, inside Hangar 3, Building 225. The F-4E underwent an extensive structural inspection; service life extension; and was upgraded with the J79-GE-17C smokeless engines. The single largest modification involved the removal of the M61A1 20-mm Vulcan cannon; ammunition drum; gas purge scoop; related hydraulics lines; and all related electronics from the nose/forward fuselage section. The following is a list of the key modifications to convert the F-4E to the F-4G model:

Nose Section/Forward Fuselage

- In the nose section the pitot-static boom was extended by 3-in/7.6-cm and the pitot-static drainage system was relocated in the chin pod.

This picture of F-4G 69-0278 with the 561 TFS gives a good view of the weapons, electronic and fuel tank load. (Photo from the Paul Minert collection, AAHS-P000620)

- Antenna hydraulic pressure and return lines were shifted to clear room for added equipment.
- The cooling duct system was changed to provide open ducting to the added AN/APR-38 RAWS components on the equipment shelves. The AN/APR-38 avionics units were Line Replaceable Units (LRU).
- A wire bundle slide mechanism was added to the right side of the radome compartment. Wiring bundles and coax cables were added inside the radome and forward fuselage. (The rewiring work benefited from the McDonnell Douglas Corp.'s work on the F-15 Eagle assembly techniques.)
- Upper and Lower Equipment Shelves were installed in the ex-ammunition drum compartment.
- Provisions inside the nose section for a Destruct Power Supply, two additional relay panels, and lamp dimmer unit.
- The gun fairing was replaced with a new laminated fiberglass chin fairing for the AN/APR-38 array beam receivers. This fairing also affected the Nose Landing Gear door. Inside this fairing were the mid-band antenna, special warning receiver, high band antenna, and the AN/APR-38 RAWS beam receiver and forward receiver.

Cockpits

Modifications were made inside the front and rear cockpits. (See diagrams)

The rear cockpit was redesigned with some instruments relocated, some deleted, and new AN/APR-38 systems instruments added. The back-seater, duly dubbed the 'Bear', had three main displays:

- Plan-Position Indicator (PPI), which gave threat ranges and bearing (azimuth). The top 15 threats are prioritized and presented in order on the display. A threat from a AAA gun was denoted by an 'A'; a threat by a SAM was denoted by the NATO SA-number (ex: SA-2). There is a repeater PPI in the front cockpit.
- Panoramic analysis display
- Homing Indicator

Fuselage Modifications

- Hydraulic lines were replaced/relocated in the left center fuselage trough to clear room for added wire bundles.
- Wire bundles and coax cables were added in the forward/center/aft fuselage (which included the vertical tail fin). In all, 125 new wire bundles were added during the modification process.
- Wiring modifications in the inner wings/pylons for the new munitions.
- New weapons launchers were installed.
- An equipment rack was installed on the armament quick access door for the Conrac Airborne Data Recorder.
- The F-4E removable fin cap was replaced by an F-4G permanent sheet-metal, torpedo-shaped fin pod.
- Tracor AN/ALE-38 Chaff and AN/ALE-40 IR Flare Dispensers were added to the aft end of the pylons.

Munitions

The new F-4G retained provisions for all of the previously F-4E certified air-air and air-ground munitions. The new primary offensive systems for the F-4G included the following:

- Air-Air Missiles (AAM): AIM-7F Sparrow III and AIM-9L Sidewinder.
- Anti-Radiation Missiles (ARM): 'old generation' AGM-45 Shrike and AGM-78 Standard ARMs.
- Air-Ground Missiles (AGM): AGM-65D Maverick, with the IR thermal imaging targeting system.

The newly redesignated F-4G exited Building 225 on average some 110 days later. Thereafter, each F-4G underwent basic post-depot flight testing and radar/avionics testing.

FIGURE 1 – F-4G FRONT COCKPIT

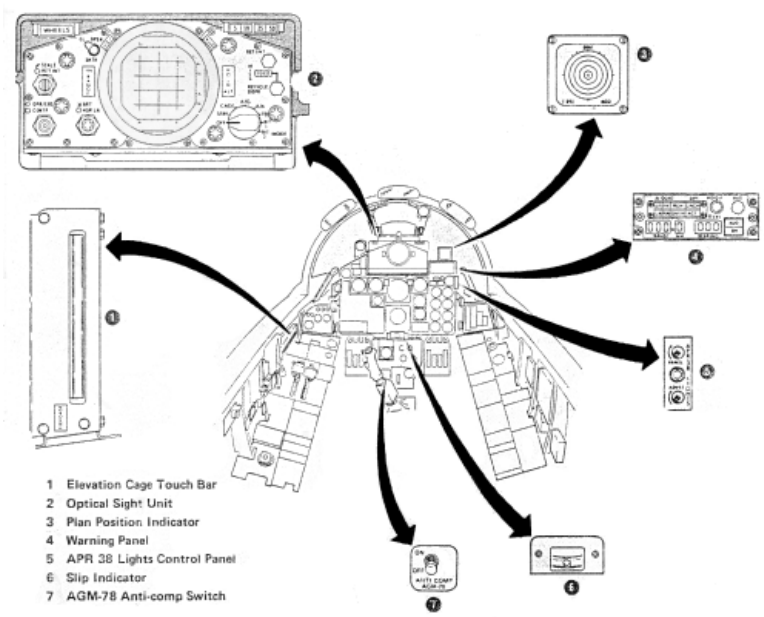
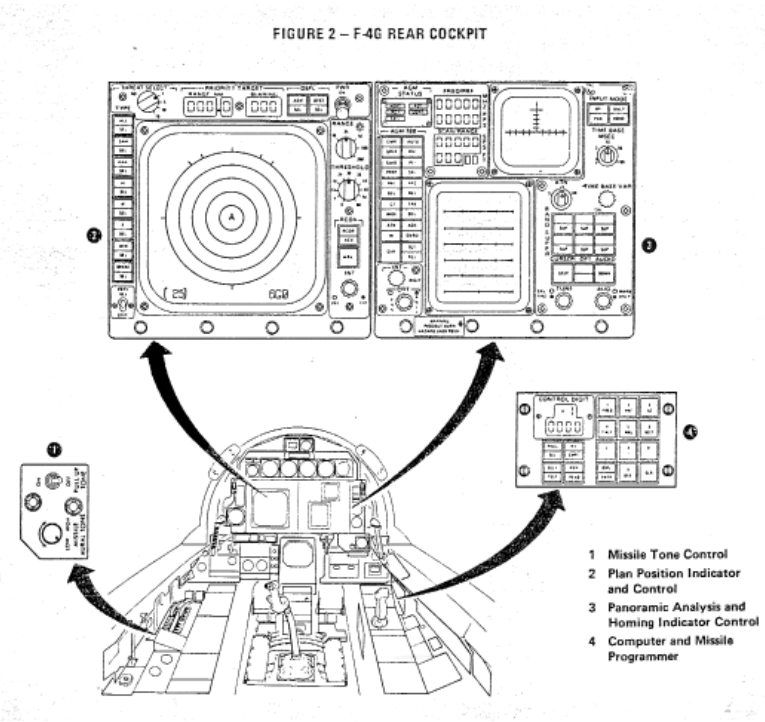
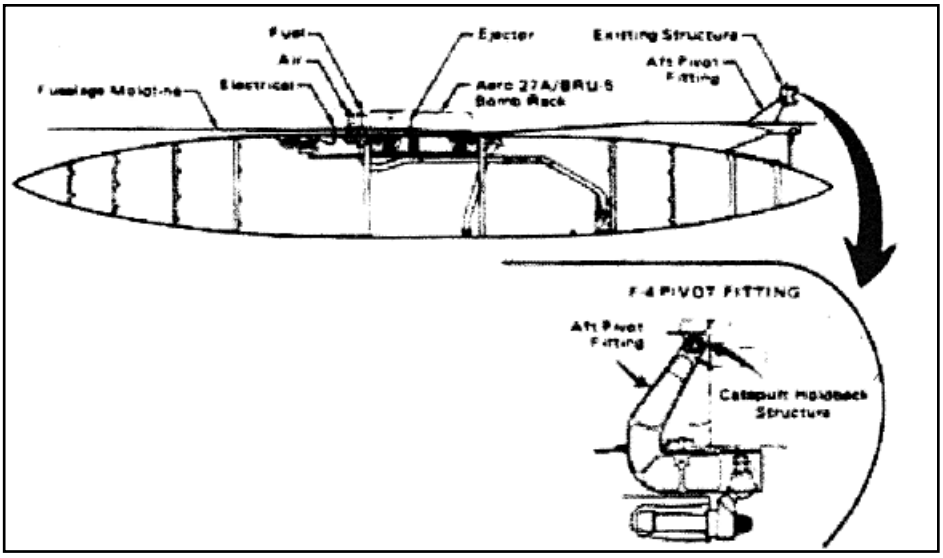


FIGURE 2 – F-4G REAR COCKPIT





F-15 tank modifications for F-4G carriage. (MDAC drawing)

1978 Program Developments

The first "production"' F-4G Wild Weasel rolled out of the Ogden ALC hangar on April 24. Col. Dudley J. Foster, 35 TFW, CO, pilot, with Capt. Dennis B. Haney, Electronic Warfare Officer (EWO), delivered prototype/production F-4G 69-7254 to the 39 TFTS/35 TFW, George AFB, on April 28. On the ground to meet them was Lt. Gen. James D. Hughes, 12 AF, and Brig. Gen. Cecil D. Crabb, TAC Training, George AFB. (By this time the cost per unit had risen to $3.4 million.)

Circa April the Wild Weasel Test Team was transferred from Nellis AFB, Nev., to George AFB. Though relocated physically, the WWTT remained assigned to TFWC through November, at which time the WWTT was reassigned to the 35 TFW. Initial Operational Capability (IOC) with the F-4G Wild Weasel was attained in October 1978. (Another source cites the IOC on April 1, 1979.)

High Performance Centerline Tank

In April Ogden ALC ordered the newly developed High Performance Centerline Fuel Tank (CFT) for the F-4G Wild Weasel fleet. USAF and the ANG subsequently adapted this new external fuel tank (T.O. 1F4-1308) to the F-4D and F-4E fleets. Adopting and adapting the fuel tank developed for the McDonnell Douglas F-15 Eagle meant that USAF had finally found a use for the USN designed catapult holdback fitting. The new CFT pivot system ensured the tank rotated downward 20-degrees before separation. This greatly reduced the damage to the control fins of the aft-mounted ATM-7 Sparrow III AAMs; the aircraft engine doors and stabilator — as was common with the original Phantom II designed CTF.

The F-4G Wild Weasel program included a 6.5-hour flight test program of the new aerial refueling boom intended for installation on USAF's new Douglas KC-10 Extender tanker.

1979 - Deliveries

Lt. Col. Duke Green, CO, 81 TFS, AC/CAPT Mike Freeman, EWO, ferried the first USAFE assigned F-4G across the Atlantic Ocean to an eager reception at Spangdahlem AB, West Germany, on March 28. Initially the 81 TFS/ 52 TFW was equipped fully with the F-4Gs, however, as the full complement of 36 F-4G Wild Weasels arrived they were split evenly between the 23 TFS, 81 TFS, and the 480 TFS. The last USAFE F-4G arrived on March 11, 1980, (another published source identifies the date as November 3). The 52 TFW was the only Wild Weasel wing to formally pair each F-4G with one General Dynamics F-16 Falcon in what was called the Hunter-Killer tactic. The F-4G did the hunting and passed on the electronic data to the F-16, which then did the killing.

PACAF's 3 TFS/3 TFW, Clark AB, Republic of the Philippines, took delivery of their first F-4Gs in September 1979. The 3 TFS and 90 TFS operated a mix of F-4Es and F-4Gs. through 1990.

1980 - Deliveries

Due to overcrowding of 35 TFW's F-4s fleet at George AFB, TAC reactivated the 37 TFW to take over the Wild Weasel mission and fleet at George AFB. The 37 TFW was assigned the 562 TFTS, with the training mission, and two operational squadrons, the 561 TFS and the 563 TFS. In all, 96 F-4Gs were delivered to the front-line combat wings. The remaining 20 F-4Gs were retained at George AFB as attrition replacements, training, and for testing purposes.

The TAWC, Eglin AFB, Fla., was charged with providing all operational and technical electronic combat expertise to tactical air forces. Included in the mission tasking was assumption of the WWTT from TFWC and the weapons development for the F-4G. Detachment 5/TAWC was established and replaced in place the TFWC WWTT at George AFB. Detachment 5 was charged with OT&E, Tactics Development and Evaluation (TD&E), and serving as the field manager for the F-4G weapon system. TAWC retained operational control and test management responsibility. Detachment 5 had three specially outfitted F-4G test platforms: 69-0277, 69-7206, and 69-7235. Though assigned to George AFB, these F-4Gs carried the 'OT' tailcode of the TAWC rather than the 'WA' or 'WW tailcodes of the 35 TFW and 37 TFW F-4Gs. Each of these test platforms was outfitted with an instrumentation pod in the right side Sparrow AAM well; cockpit video cameras to record the HUD graphics, and, in time, the next generation Unisys Corp.-developed AN/APR-47 Weasel Attack Signal Processor (WASP). The Conrac Airborne Data Recorder was removed from the nose chin pod and replaced by a time-code generator.

The Last Deliveries

The last of the initial batch of F-4Gs rolled out of Building 225 at Ogden ALC in June 1981.

Performance Update Program

As with any modern aircraft, the F-4G needed to be updated to keep up with the threats. The contract go-ahead for the Performance Update Program (PUP) was announced on October 15, 1982. One of the reasons for the need for the update was to bring the Wild Weasel ECM/EW avionics system up to

F-4G Block Numbers and Serial Numbers:

Block No.	Qty	S/N
F-4E-42-MC	(43)	69-0236 thru 69-0243, 69-0245 thru 69-0248, 69-0250 thru 69-0255, 69-0257, 69-0258, 69-0259, 69-0261, 69-0263, 69-0265, 69-0267, 69-0269 thru 69-0275, 69-0277, 69-0279 thru 69-0281, 69-0283 thru 69-0286, 69-0292, 69-0293, 69-0297
F-4E-43-MC	(36)	69-0304,69-0306, 69-7201, 69-7202, 69-7204 thru 69-7214, 69-7216 thru 69-7220, 69-7223, 69-7228, 69-7231 thru 69-7236, 69-7251, 69-7253, 69-7254, 69-7256 thru 69-7260
F-4E-44-MC	(28)	69-7262, 69-7263, 69-7268, 69-7270, 69-7272, 69-7286 thru 69-7291, 69-7293, 69-7295, 69-7298, 69-7300 thru 69-7303, 69-7546, 69-7550, 69-7556, 69-7558, 69-7560, 69-7561, 69-7566, 69-7571, 69-7572, 69-7574
F-4E-45-MC	(9)	69-7579 thru 69-7584, 69-7586 thru 69-7588

par with the new weapon systems, especially the new AGM-88 HARM missile. The new AGM-88A HARM (introduced in the mid-1980s) could spot and engage threat frequencies outside the range of the APR-38 RAWS. The goal was to upgrade the APR-38 computer with a new signal processor (with additional memory and processing speed). The Sperry CP-1674 signal processing computer sub-system of the APR-47 provided eight times the memory and seven times the speed of the unit it replaced. Work commenced in October 1982 with trials in 1984. The first full-up AN/APR-47 WASP set was delivered to the Aeronautical Systems Division (ASD) at Wright-Patterson AFB, Ohio, on August 3, 1988. Overall, the AN/APR-47 system was five times faster with 10 times the data processing rate presented with 20 times the display capability.

Work on Phase II commenced in March 1983. McAir awarded at $31-million contract to E-Systems to develop a new Direction Receiver Group with an increased frequency range. Even with the prototype receiver set delivered in March 1987, the delays caused by technical problems led TAC to cancel Phase II effective March 23, 1988.

Though not identified as being a part of the PUP program, in March 1983 TAWC Det 5 commenced testing of the Lear-Siegler AN/ARN-101 DMAS navigation system fitted to the F-4G. Soon thereafter the AN/ARN-101 was installed (T.O. 1F4G-504) during regularly scheduled PDM trips to the Ogden ALC. Unlike the F-4E, the F-4G AN/ARN-101 DMAS system did not include the LORAN subset and spine antenna - there was simply no more room left in the F-4G spine for more antenna.

Undated photographs in this time period show the F-4G loaded with a AN/ALQ-119V(12) ECM pod in the forward left Sparrow missile well; a AGM-65A Maverick TV-guided missile on the left inboard pylon; AGM-88A HARM on the left outboard pylon; AGM-78D Standard ARM on the right inboard pylon; and a AGM-45C Shrike ARM on the right outboard pylon.

Batch II F-4G

In the late 1980s USAF/TAC placed an order for 18 Batch II F-4G conversions. These aircraft were likewise taken from the FY69 fleet and received the PUP upgrade on the conversion line. The first of these F-4Gs was delivered in June 1987.

F-4G Block II Block Numbers and Serial Numbers

Block No.	Qty	S/N
F-4E-42-MC	(8)	69-0244, 69-0249, 69-0260, 69-0264, 69-0278, 69-0290, 69-0298, 69-0303
F-4E-43-MC	(2)	69-0305, 69-0307
F-4E-44-MC	(8)	69-7252, 69-7261, 69-7267, 69-7268, 69-7294, 69-7297, 69-7551, 69-7557

1989 - Beginning of the Draw Down

In the fall of 1989 the 37 TFW, George AFB, released their F-4G Wild Weasels back to the 35 TFW. (The 37 TFW designation went to the Lockheed F-117 Nighthawk, aka, *Stealth Fighter*.) The 35 TFW was then equipped with the 561 TFS and the 562 TFTS.

Follow-on Wild Weasel Platform

TAC did not give up on its desire to complete upgrading the Wild Weasel system. Via the Directorate of Electronic Combat, TAC issued a Request for Information (RFI) for a follow-on Wild Weasel platform (Wild Weasel VI). Contracts for the study phase of the Manned Lethal Suppression of Enemy Air Defense (MLSEAD) program were let with anticipation of an airframe selection in 1990. The Wild Weasel community favored a two-seat platform. A three-year demonstration and validation phase was to follow with one contractor to be chosen for full scale development. Leading contenders were the McDonnell Douglas Corp. F-15 Eagle, General Dynamics F-16 Falcon, USAF's Advanced Tactical Fighter (ATF), the USN's contentious Advanced Tactical Aircraft (ATA, subsequently designated the A-12 Avenger*)*, and the tri-national Panavia Tornado. (The Panavia Tornado plan was apparently quashed due to budget considerations but was just as likely the victim of the not-built-here-phobia.)

Then came the proverbial rain. With the collapse of the U.S.S.R. many in the U.S. government, especially in the Congress, promoted the immediate and dramatic reduction in defense spending. This concept was called the "Peace Dividend." The follow-on Wild Weasel program was cancelled in 1990. USAF concluded that the service could not afford mission-specific, dedicated platforms in the shrinking military force structure and dog-eat-dog budget fights. (A single F-4G Wild Weasel squadron cost three times that of an F-16 Falcon squadron. Too, with the Phantom II for the most part retired from front line service the F-4G spare parts depot was

located in the "boneyard," i.e., the Aerospace Maintenance and Regeneration Center (AMARC) at Davis-Monthan AFB, Arizona.

1990 - PACAF

During the second half of the year the 3 TFW, Clark AB, R.P., began transferring their fleet of PAVE TACK-equipped F-4Es and F-4Gs to the continental U.S. Most of these aircraft were sent directly to the AMARC facility for long-term storage.

F-4G 69-0250 assigned to 480 TFS / 52 TFW at Husum AB, Germany, on April 12, 1989. (Photo by Rolf Flinzner from the Stephen Miller collection)

Persian Gulf War

In early August 1990 Iraq's President Saddam Hussein helped USAF change some of its plans regarding the early retirement of the F-4G Wild Weasel fleet. At the time the USAF plan was to transfer 36 F-4Gs to the Air National Guard (ANG) in 1992. The 3 TFW, Clark AB, R.P., was in the final stage of phasing out the F-4E and F-4G models.

Iraq launched a surprise attack into the small nation of Kuwait. The U.S. response was to assemble a large, forward staged military force in the Middle East to confront the Iraq military. Among the weapon systems deployed was a significant force of F-4G Wild Weasels. The 561 TFS/35 TFW, George AFB, deployed to Sheik-al Isa AB, Bahrain. Elements of the 52 TFW, Spangdahlem AB, Germany, deployed to Incirlik AB, Turkey. The last of the 90 TFS/3 TFW F-4E PAVE TACK/F-4G Wild Weasel aircrews volunteered to deploy to supplement the 52 TFW force at Incirlik AB.

1991 - WAR!

On the morning of January 17, 1991, the F-4Gs led the way. This was the F-4Gs combat debut - and what a debut it was! The F-4G was the only tactical aircraft with real-time capability of locating AND destroying radar-guided surface-to-air threats. This was a critical feature in so much as the Iraq military had the most diverse air defense force in the region. In addition to the ex-U.S.S.R. designed surface-to-air weapon systems, the Iraq air defense net included many Western-designed surface-to-air weapon systems NOT included in the Wild Weasel computer library. The F-4G's AN/APR-47 RAWS provided the strike forces with threats in the strike package area(s); this earned the Wild Weasels the nickname of 'Weasel Police.' Strike aircraft aircrews would check with the Wild Weasels regarding the treats as a primary way of avoiding the unnecessary jettisoning of expensive ordnance due to false alarms. During the early stage of Operation DESERT STORM Detachment 5's civilian contractor, Texas Instrument deployed an AGM-88B HARM Tiger Team to Sheikh-al Isa AB, Bahrain, to investigate instances of HARM missile hang-fires. A total of three U.S. aircraft fell to SAMs during this war, however, no Coalition aircraft fell to a SAM when a Wild Weasel was on station!

Following the February 1991 cease fire the majority of the in-theater F-4G Wild Weasel fleet returned to their home bases. A small unit staffed on a rotational basis remained in-theater for several more years (Operation SOUTHERN WATCH, 4404 Composite Wing, Dhahran Royal Saudi AFB (RSAFB), Saudi Arabia). Circa 1993 the F-4Gs were carrying the AN/ALQ-13 l(v)-14 ECM pod for self-protection.

A Department of Defense announcement, dated 12 April, addressed the reasoning for transferring the F-4Gs to the Air National Guard:

> "... an interim realignment to the Air Reserve Component pending the development of a modernized capability which will result in the subsequent retirement of the F-4G aircraft."

During the summer the 190 RS/124 RG, Idaho ANG, based at Gowen Field, Boise, began transitioning from the RF-4C Phantom II to the F-4G Wild Weasel.

By mid-1991, in spite of its stellar combat performance, the F-4G was being written out of USAF's long range planning. New plans for the next generation SEAD platform(s) included modifying existing McDonnell Douglas F-15 Eagles and General Dynamic Block 50D F-16 Falcons in what was dubbed the 80 percent solution, that being the combination of the F-16/F-15 modifications would be capable of 80 percent of the existing F-4G Wild Weasel capability. The remaining 20 percent would be made up via a combination of new tactics, new weapons, and a larger number of aircraft assigned to the Wild Weasel role. This 80 percent solution was to be less capable but, more importantly in the reduced defense budget fights, cheaper to operate. Modifications to the Block 50D F-16Cs included the AN/ASQ-213 HARM Targeting System (HTS) mounted in a PAVE PENNY fairing on the right side of the forward fuselage, just below the cockpit. One identified limitation of the HTS was the speed of acquiring targets and the number of targets that could be targeted in the heat of battle. This system allowed the F-16Cs to receive SEAD data. A force of 100 F-16C Wild Weasel SEAD upgrades were scheduled to enter USAF service in 1994. F-16C Wild Weasels were scheduled to be based at Shaw AFB, S.C.; Mountain Home AFB, Idaho; Misawa AB, Japan; and Spangdahlem AB, Germany. Another modification program is/was the three-phased F-16/HARM/Shrike Integration Program. This quick reaction capability (QRC) was to satisfy TAC/ACCs need to increase defense suppression capability by augmenting the shrinking F-4G Wild

Weasel force with the modified F-16s. No modifications to either the aircraft or the missiles were permitted during the first two phases. During Phase III the AGM-88 HARM Block IV capability was added to the designated F-16s.

One of the new munitions described is the "Silent Hard Kill" (Shark) ARM missile, designed to hunt down enemy radars, even when they are not radiating.

The Precision Director Finding (PDF) prototype system for the F-15 Eagle SEAD development program was scheduled to begin in 1991 and would retain the Martin Marietta Low Altitude Navigation and Targeting Infra Red for Night (LANTIRN) system. Circa early 1992 USAF was favoring the combination of the AGM-88 HARM capable F-15E Strike Eagle model to fill this development program. In early 1994 McDonnell Douglas Corp. received a $21-million contract to cover the period of development work (June 30, 1994, through June 30, 1996) for the demonstration and validation of the PDF prototype. IOC of the F-15 PDF SEAD platform was scheduled for the year 2000.

Following the Persian Gulf War the plan to transfer F-4Gs to the ANG was restructured. The transfer to the Nevada ANG was halted after just one F-4G was so transferred. Instead, the Idaho ANG received an enlarged unit with the added mission of Wild Weasel training.

There was the general forces drawdown to meet the post-Cold War force restructure ('Peace Dividend') organization. Under terms of the Officer Early Release Program, F-4G Wild Weasel aircrewmen were not eligible for this 'enforced' voluntary early separation (nor were the aircrews for the F-15E Strike Eagle, Lockheed C-130 Hercules and C-5 Galaxy transports, and the Boeing E-3 Sentry AWACS platform).

While having been relegated to the "bone yard," many of the F-4Gs continued to serve, all-be-it shortly, by being converted to QF-4Gs such as 69-0214 seen here. (USAF photo from the Paul Minert collection, AAHS-P000680)

1992 Deactivations

The 35 TFW (35 FW) at George AFB stood down in early march. As part of the PACER SWAP program, the remaining F-4Gs were sent to one of four programs: storage in AMARC; the Idaho ANG; retired to display status; or service life retired and transferred to range ground targets on the Nellis AFB, Nev., range complex. This deactivation left the entire continental U.S. and Pacific theater without an in-place Wild Weasel force for the first time in some 25 years. However, this void did not last long. USAF reactivated the 561 FS at Nellis AFB. The Detachment 5 F-4G Test Team finally returned to their roots at Nellis AFB. Shortly after being relocated back to Nellis AFB Detachment 5 was redesignated Detachment 6, 79 TEG/TAWC (soon to be itself redesignated Air Warfare Center, AWC). Between November 1992 and January 1993 Detachment 6 conducted OT&E tests of the AGM-88C HARM model. This test program culminated with live-fire tests.

Undated in this time frame the training pipeline for the F-4G Wild Weasel was being shut down. USAF was no longer training EWOs. All remaining EWOs were of captain rank or higher, and some 85-90 percent of the then-current EWOs were combat veterans.

The 52 FW, Spangdahlem AB, Germany, was scheduled to retire the last of their F-4Gs prior to January 1, 1993. However, the Wing retained their Wild Weasels for an additional year, during which time they deployed detachments to Incirlik AB to support Coalition forces enforcing the No-Fly Zones.

1993 Activity

As of January 31, 1993, 107 of 134 F-4Gs were still listed on the USAF roster:

- 34 assigned to the Idaho ANG
- 18 assigned to the 52 FW, Spangdahlem AB, Germany
- 9 assigned to ACC (enroute to Nellis AFB)
- 44 were in storage at AMARC, Davis-Monthan AFB
- 2 F-4Gs had been bailed to Tracor Systems Inc., at Mojave Airport, Calif., for conversion to the QF-4G FSAT model.

Flight hours of the remaining F-4Gs ranged from a low of 3,831 hours to a high of 6,427 hours as of January 31.

'The Last Great Fighter Squadron'

Detachment 6's flagship, F-4G 69-7235, arrived at Nellis AFB on January22. On February 1, USAF budget cuts resulted in some reorganizing - control and responsibility for the F-4G Test Team was transferred from AWC to Nellis AFB. Also, Detachment 6 was inactivated; assets were transferred to the 422 TES. More importantly, the 561 FS reactivated on February 1 and was assigned to the 57 FW (redesignated the 57 Wing, April 1). F-4G 69-0277 arrived at Nellis AFB on February 1. F-4G 69-7206 was listed as non-flyable and used in the ground maintenance training role. To fill out the 561 FS F-4G fleet some aircraft recently placed into desert storage at AMARC were retrieved for active duty.

There is a report (*Pacific Flyer*, August 1993) that cites a congressional aide informing *Aviation Week & Space Technology* magazine that consideration was given to establishing Wild Weasel detachments within the two new, large composite wings being formed - one at Moody AFB, Ga., and the other at Pope AFB, North Carolina. A USAF official was also cited having stated additional Wild Weasel detachment sites could include Shaw AFB, S.C., and Misawa AB, Japan.

In April responsibility for Operation SOUTHERN WATCH

was transferred to the Idaho ANG. The Idaho ANG rotated personnel through this combat theater for the next six months, after which the mission was transferred to the 561 FS. In August the 561 FS forward deployed a detachment of six F-4Gs to Dhahran RSAFB, Saudi Arabia, to support this new mission.

By late in the year USAF had launched a new initiative for SEAD. This broad scope plan involved maintaining a limited number of F-4Gs, improved SEAD-related standoff weapons, and development of the next generation non-specialized SEAD replacement aircraft. In one published account USAF officials were cited for their concern about the Wild Weasel frame of mind being diluted by the transition from the specialized Wild Weasel role/unit to the non-specialized, multi-role mission. The F-16 'Wild Weasels' are to fly the Weasel role and continue training in the conventional bombing mission.

In October the first of five F-16C Wild Weasel squadrons began standing up with 18 aircraft each. The plan was for all five squadrons to be formed by the end of September 1994. As of mid-year ACC listed 134 F-4Gs assigned to front-line USAF and USAFE units, with another 24 f-4Gs assigned to the Idaho ANG.

In December the 52 TFW stood down their Wild Weasel detachment at Incirlik AB, Turkey. The last flight of four USAFE F-4G Wild Weasels departed from Turkey on December 30.

1994 Budget

The 52 FW, Spangdahlem AB , Germany, stood down from the F-4G Wild Weasel mission on January 14. On January 24 a detachment of Wild Weasels left Germany, bound for overhaul at the USN's Naval Air Depot at MCAS Cherry Point, North Carolina. The wing released the last four of their F-4G Wild Weasels on February 18.

There was a late plan to upgrade a small fleet of 48 F-4Gs with an Improved Data Modem for transferring targeting data; a GPS receiver for improved navigation and targeting accuracy; a new radar for better ground clutter screening - even when enemy radars were silent. The overall program was estimated to cost $50-million, plus another $3-million for the radar suite. However, by early 1994 USAFs long range budget plans no longer included a five-year funding line for the F-4G Wild Weasel. Without funding no aircraft modifications were allowed.

On October 5, the 79 FS/20 FW, Shaw AFB, S.C., deployed a detachment of Block 50 F-16 Falcons to relieve the 561 FS's six F-4Gs of the Operation SOUTHERN WATCH commitment. However, six days later, in response to Iraqi troop posturing, the 561 FS surged 12 F-4Gs back to the theater for a month of supplemental support.

1995 Fleet

In 1995 the 561 FS was the largest in the ACC with 24 F-4Gs and 72 aircrewmen assigned.

1996 Curtains

On January 11 the last operational mission in a USAF F-4 Phantom II of any model was flown out of King Abdul-Aziz AB, Saudi Arabia, to commemorate this occasion Lt. Col. Guy 'Ta-Tanka' Fowl shared his feelings in a poem: (See *SMOKE TRAILS* Vol. 10, No. 2)

Four F-4G Wild Weasels were poised that day,
To fly their last combat sortie, to fly into Iraq.

The photographers and aircrew too,
Would have preferred skies of blue,
But low flying clouds and blowing rain,
Marked the day—what a pain!

But with your aircraft, HARM missile laden,
As you flew into skies so leaden,
As you slipped the bonds of earth,
And when you reached the halls of space,
Between the clouds, lingering there,
I hope you reached up, not to God,
But to the flying veterans there.

Assembled in their lofty lair,
Fleeting images in the air,
In the clouds were the faces,
Of all the previous combat aces.

From World War I and World War II,
Korea, Viet Nam, and Gulf War too,
Great fighters flew into the blue.
Some remain, some have departed,
But all have contributed to our nation,
For one thing constant among all fighters,
The spirit of honor and duty never departed.

So if your last F-4 combat sortie,
Was flown in Arabian skies so cloudy,
Remember in all those cloudy places,
Were the souls of combat faces.

Silently, in quick procession,
Fleeting past your rain slashed formation,
Right hands straight, and at their brow,
Saluting you who still fly now.
So now we toast our fighter friends,
Departed.