



DEPARTMENT OF THE NAVY
COMMANDER NAVAL AIR FORCE
UNITED STATES PACIFIC FLEET
NAVAL AIR STATION, NORTH ISLAND
SAN DIEGO, CALIFORNIA 92135-5100

5830
Ser 31/ 11894
24 NOV 1992

SIXTH ENDORSEMENT on CDR (b) (6) (b) (6) USN ltr of 20 Jun 92

From: Commander Naval Air Force, U.S. Pacific Fleet
To: Judge Advocate General (Code 33)

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED ON 7 MAY 1992

1. Readdressed and forwarded, concurring in the proceedings, findings of fact, opinions and recommendations of the investigating officer and previous endorsers.

2. As a Mean Starlight qualified night vision goggle pilot with over 2000 hours in the aircraft, it is reasonable to assume that LCDR McGuire was comfortable in the low altitude flight regime both day and night. It is also reasonable to assume that a daylight, single-plane flight, limited to 1000 ft AGL by Standard Operating Procedures may have been viewed as mundane and unchallenging by LCDR McGuire. This subtle complacency coupled with possible overconfidence while flying in close proximity to the ground offer the only plausible explanation of why a senior, highly respected pilot would knowingly violate SOP and ultimately fail to extricate himself from an extremis situation. We have yet another example of the unforgiving nature of Tactical Naval Aviation and the fact that even a brief lapse in professionalism can produce catastrophic results.

3. CDR (b) (6) should indeed be commended for his clear, concise and in-depth investigation of the circumstances surrounding this tragic mishap. His innovative use of computer graphics should serve as a model for the presentation of dynamic elements in future investigative packages.

Edwin R. Kohn
EDWIN R. KOHN

9202989



EXT. 1
33.4

Copy to:
COMTHIRDFLT
COMCARGRU
COMSTRKFIGHTWINGPAC
CVW 11
VFA 22
CDR (b) (6), USN

2905-92



DEPARTMENT OF THE NAVY
COMMANDER THIRD FLEET
FPO AP 96601-6001

IN REPLY REFER TO:

5800
Ser OOJ/0447
14 Sep 92

FIFTH ENDORSEMENT on CDR (b) (6) S. (b) (6) USN, ltr of 20 Jun 92

From: Commander THIRD Fleet
To: Judge Advocate General
Via: Commander, Naval Air Forces, U.S. Pacific Fleet

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED
WITH THE FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED
ON 7 MAY 92

1. Readdressed and forwarded, contents noted. This matter falls
under the primary cognizance of Commander, Naval Air Force, U.S.
Pacific Fleet.


K. R. VIENNA
By direction

Copy to:
COMCARGRU-3
COMSTRKFIGHTWINGPAC
CVW-11
STRKFITRON-22
Investigating Officer



DEPARTMENT OF THE NAVY
COMMANDER CARRIER GROUP THREE
FPO SAN FRANCISCO, CALIFORNIA 96601-4303

IN REPLY REFER TO:

5800
Ser 003/466
7 AUG 92

FOURTH ENDORSEMENT on CDR (b) (6) S. (b) (6) USN, ltr of 20 Jun 92

From: Commander, Carrier Group 3
To: Commander, Third Fleet

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED
WITH THE FLIGHT MISHAP INVOLVING BUNO 164031 WHICH
OCCURRED ON 7 MAY 1992

1. Readdressed and forwarded, concurring in the proceedings, findings of fact, opinions, and recommendations of the Investigating Officer and previous endorsers.
2. Apparently a highly respected professional crashed and died while flying very unprofessionally. This extraordinary lapse of judgment evidently occurred without any outward warning signs. I cannot accept that. Either we missed the signs or the Strike Fighter community should reexamine its criteria of professionalism. We cannot incur such a loss and fail to discover and understand the underlying cause.

J. J. DANTONE

Copy to:
COMSTRKFIGHTWINGPAC
CVW-11
STRKFITRON-22
Investigating officer



DEPARTMENT OF THE NAVY

COMMANDER STRIKE FIGHTER WING

U.S. PACIFIC FLEET

NAVAL AIR STATION

LEMOORE, CALIFORNIA 93246-5022

IN REPLY REFER TO:

5800

Ser 011/ 1503

27 JUL 1992

THIRD ENDORSEMENT on CDR (b) (6) S. (b) (6) USN, ltr of 20 Jun 92

From: Commander, Strike Fighter Wing, U.S. Pacific Fleet
To: Judge Advocate General
Via: (1) Commander, Carrier Group THREE
(2) Commander, Naval Air Force, U.S. Pacific Fleet

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED ON 7 MAY 1992

1. Readdressed and forwarded, concurring in the proceedings, findings of fact, opinions, and recommendations of the Investigating Officer and previous endorsers.
2. The "lesson learned" in this mishap is one which has been learned and re-learned by naval aviators over the years. The lesson here is that well-established safety procedures have been put in place to protect the pilot and his aircraft. These rules can be disregarded only at the peril of the mission pilot. I am equally at a loss to explain or understand the behavior of a naval aviator who had the highest reputation for professionalism within his squadron and this community. It is incumbent upon each of us in leadership positions to re-double our efforts to ensure that all aviation events are pursued aggressively, but within the bounds of established procedures.
3. I also commend CDR (b) (6) for an outstanding report. The use of computer-generated figures greatly added to the Investigating Officer's report and the ability of reviewing officials to understand what happened in this case. I concur that this computer tool should be made available to Investigating Officers in future cases where appropriate.

R. E. ARNOTT
Acting

Copy to:
STRKFITRON 22
Investigating Officer
COMCARAIRWING ELEVEN



DEPARTMENT OF THE NAVY
COMMANDER
CARRIER AIR WING ELEVEN
FPO SAN FRANCISCO 96601-4408

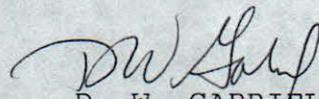
5800
Ser 00/096
09 July 1992

SECOND ENDORSEMENT on CDR (b) (6) S. (b) (6) USN, ltr of 20 Jun 92

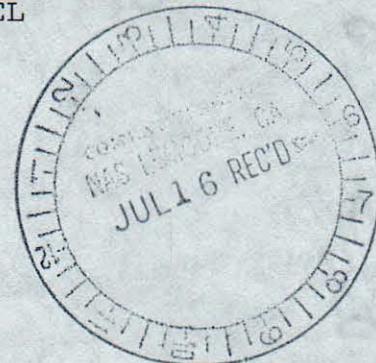
From: Commander, Carrier Air Wing 11
To: Judge Advocate General (Code 33)
Via: (1) Commander, Strike Fighter Wing, U.S. Pacific Fleet
(2) Commander Naval Air Force, U.S. Pacific Fleet

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED
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OCCURRED ON 07 MAY 1992

1. Forwarded.
2. The Mishap Pilot (MP) broke clearly articulated and well understood rules. The result was his tragic death and the loss of a valuable aircraft. I will never understand what prompted this fine naval officer and highly skilled pilot to disregard squadron SOP, CNO instructions and common sense. Rules in Naval Aviation are often written from tragic experience. If nothing else, LCDR McGuire's death will serve to remind Naval Aviators of this fact and graphically point out the potentially devastating consequences of selectively disregarding or obeying rules according to whim or preference.
3. The Investigating Officer is to be commended for a thorough and expert investigation, in particular, the graphic representations of the mishap aircraft immediately prior to impact. The endorser found this tool very useful in clarifying the flight of the mishap aircraft. This methodology and the attendant computer tools should be taught and made available for use in all similar investigations.
4. Subject to the foregoing, the findings of fact, opinions and recommendations of the Investigating Officer and first endorser are concurred in.


D. W. GABRIEL

Copy to:
COMCARGRU THREE
CO, VFA 22
CDR J. A. (b) (6)





DEPARTMENT OF THE NAVY

STRIKE FIGHTER SQUADRON 22
FPO AP 96601-6202

IN REPLY REFER TO:
5800
Ser ADMIN/241
8 Jul 92

FIRST ENDORSEMENT on CDR (b) (6) S. (b) (6), USN, ltr of 20 Jun 92

From: Commanding Officer, Strike Fighter Squadron 22
To: Judge Advocate General
Via: (1) Commander, Carrier Airwing ELEVEN
(2) Commander, Strike Fighter Wing, U.S. Pacific
(3) Commander, Carrier Group THREE
(4) Commander, Naval Air Forces, U.S. Pacific Fleet

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE
FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED ON 07 MAY 1992

Encl: (44) Mishap Aircraft Assymetric Flight Considerations

1. Readdressed and forwarded. The investigation results were delayed beyond the 30 day requirement while waiting the outcome of engineering investigation results.

2. Summary of facts. This mishap involved an FA-18C, Buno 164031, Modex 300, assigned to Strike Fighter Squadron 22 (VFA-22) which crashed during unauthorized low level flight 07 May 1992 at 0925 local. The pilot, LCDR Kenneth F. McGuire, USN, of VFA-22 was killed on impact. The crash site is on uninhabited U.S. Forest land in Marble Canyon, approximately 7.5 nautical miles (NM) southeast of Bishop, CA and 8 NM east of the first VR-208 check-point. Weather was 10,000 feet scattered, 15,000 feet scattered and 40 mile visibility. Witnesses establish the beginning of unauthorized low level flight north of the R-2508 complex along the Owens River. The aircraft was heading north and made a right turn at 200 feet AGL into Black Canyon. Credible witness in Black Canyon immediately prior to Marble Canyon judged the mishap aircraft turning through the natural canyon bend to be at 150 feet above the canyon floor in a level left hand 90 degree angle of bank turn trailing white vortices from the wing tips. Calculations show that at the completion of this turn 1200 horizontal feet and 1.5 seconds remained to the first impact point with 1600 feet and 2 seconds required for a successful pull up maneuver (see figures 1-4, pages 16-17). First impact point was 150 feet above the canyon floor. The second impact point was 300 yards beyond, 20 degrees elevation above the first. The aircraft had no outstanding maintenance discrepancies relevant to the mishap. LCDR McGuire was scheduled as a single plane adversary (call sign Beef 3) to oppose a second flight of four VFA-22 aircraft (call sign Beef 2) on a low level navigation training sortie. The 72 hours history of LCDR McGuire preceding the mishap indicates no significant sociological, psychological, or human factors relating to the mishap. LCDR McGuire was fully qualified to conduct the assigned mission. The mission, including adversary



Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED ON 07 MAY 1992

rules of engagement, was briefed in accordance with squadron standard operating procedure (SOP). LCDR McGuire took off 5 minutes ahead of Beef 2 flight. Search and Rescue was initiated out of Naval Weapons Center, China Lake, by COSO 35, a Navy HH-1 helicopter. COSO 35 arrived at the crash site approximately 1040 local. LCDR McGuire's body was discovered by the SAR crew at approximately 1200 local. Initial identification was made by flight gear markings with final identification by autopsy fingerprint. Salvage operations are complete.

3. Opinions. Concur with the opinions of the Investigating Officer with the following comments:

a. Opinion 4. Recommend modify to read as follows: The unauthorized low level portion of the mishap flight began prior to entering the foothills. Witnesses establish LCDR McGuire at approximately 200 feet AGL heading north along the Owens River Valley and making a right hand turn into the foothills at Black Canyon.

b. Opinion 6. Recommend add the following statement: In addition to the stated aerodynamic considerations, finding of fact 10 establishes potential for asymmetric flight with one drop tank on centerline and one on a wing pylon. In the worst case scenario where the drop tank on wing pylon 3 would not transfer (still containing approximately 2300 pounds of fuel equating to 16,790 foot pounds asymmetry), it is determined in enclosure (44) that the angle of attack limits are -6 to +12 degrees. Finding of fact 31 and 32 show that approximately +10 degrees AOA was the maximum available to LCDR McGuire at time of impact. Therefore, loss of control due to asymmetric flight was not a factor in this mishap.

c. Opinion 10. Recommend modify to read as follows: Visual illusions resulting from the combined effects of multi-colored rock, morning shadows, and a sloping canyon floor, existed at both the canyon bend and the first impact site. These illusions, when coupled with the lack of any reported pre-flight terrain study, contributed to the mishap by delaying LCDR McGuire's recognition of the rising canyon floor and rock outcroppings for a brief, but critical instant of time. (Findings of Fact (12), (20), (34), (35), and (36)).

d. Opinions 9, 11, 12 and 13. The following comments are provided: As VFA-22's most experienced FA-18 pilot (2175 hours in type), Night Vision Goggle Pilot and Operations Officer, LCDR McGuire routinely demonstrated mature judgment and decisive tactical performance. This clear breach of flight discipline, while uncharacteristic, nevertheless requires that responsibility and accountability for this mishap rests solely with the pilot, LCDR McGuire.

4. Recommendations.

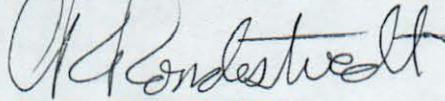
a. Incorporate VFA-22 and Commander, Strike Fighter Wing, Pacific, single aircraft SOP of 1000 feet AGL minimum altitude during daylight into existing VFA-22 low level briefing guide training rules. These rules, briefed prior to every low level flight, would reinforce the 1000 feet minimum altitude to pilots on single ship missions. This reminder is particularly important to NVG pilots who are authorized to train at night, single aircraft, and 200 feet AGL. Complete.

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE
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b. Classify squadron adversary sorties in the VFA-22 low level training rules as single ship missions for the purpose of low level flight. Complete.

5. The investigating officer, CDR (b) (6) S. (b) (6), USN, is to be commended for a thorough and timely report.

6. Subject to the foregoing, the proceedings, findings of fact, opinions and recommendations of the investigating officer are approved.



C. R. RONDESTVEDT

20 Jun 92

From: CDR (b) (6) (b) (6) USN
To: Commander, Carrier Air Wing Eleven
Via: Commanding Officer, Strike Fighter Squadron Twenty Two

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES
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WHICH OCCURRED ON 07 MAY 1992.

Ref: (a) JAG Manual
(b) COMSTRKFIGHTWINGPACINST 5830.1B

- Encl:
- (1) COMCARAIRWING ELEVEN Appointing Order, 07 May 92
 - (2) Request for Extension of Reporting Deadline
 - (3) CVW-11 Approval of Extension Request
 - (4) LCDR McGuire's orders
 - (5) Aeromedical Clearance for LCDR McGuire
 - (6) F/A-18 NATOPS qualification for LCDR McGuire
 - (7) Instrument qualification for LCDR McGuire
 - (8) Flight Physiology record for LCDR McGuire
 - (9) Flight Time Summary for LCDR McGuire
 - (10) BUNO 164031 Flight time summary and FCF Data
 - (11) BUNO 164031 list of Outstanding Aircraft Discrepancies and Aircraft Inspection/Acceptance Record
 - (12) BUNO 164031 Special Inspection Data
 - (13) BUNO 164031 list of Outstanding Technical Directives
 - (14) BUNO 164031 Aircraft configuration
 - (15) VFA-22 Flight Schedule of 07 May 92
 - (16) Statement of LCDR (b) (6) (b) (6) BEEF 2 flight leader
 - (17) Statement of LCDR (b) (6) (b) (6) BEEF 2 flight member
 - (18) Oakland center Radar voice transcript and track information
 - (19) Weather Observation for Bishop airport, CA, 07 May 92
 - (20) Statement of Colonel (b) (6) (b) (6) USAF(R), Mammoth Lakes, CA, witness
 - (21) Investigating Officer's notes from telephone interview of Mr. (b) (6) (b) (6) Bishop, CA, witness
 - (22) Maps of mishap area showing locations of witnesses
 - (23) Photographs of Black Canyon and the mishap site
 - (24) Statement of Dr. (b) (6) (b) (6) Bishop, CA, witness
 - (25) Investigating Officer's notes from personal interview of Dr. (b) (6)
 - (26) Investigating Officer's notes from telephone interview of Lt. (b) (6) (b) (6) China Lake SAR pilot
 - (27) Photographs of impact areas
 - (28) Plot of aircraft debris field
 - (29) Engineering Investigation results for aircraft engines

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES
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WHICH OCCURRED ON 07 MAY 1992.

- (30) Engineering Investigation results for flight control actuators and
ejection seat components
- (31) Investigating Officer's Observations
- (32) Aircraft flight path, turning G, and pullup calculations
- (33) Photographs of morning shadowing at the Black Canyon bend and
the mouth of Marble Canyon
- (34) 72 Hour History of LCDR McGuire
- (35) Autopsy Report for LCDR McGuire
- (36) Flight Surgeon's assessment of Autopsy report
- (37) VFA-22 PAC XRAY Message DTG 072226Z May 92
- (38) Inyo Register newspaper dated Friday, 08 May 1992
- (39) OPNAVINST 3710.7N, Para 509
- (40) STRKFITRON22INST 3500.1 CH-1, page II-6, para 6
- (41) OPNAVINST 3710.7N, Para 533
- (42) Statement of LCDR (b) (6) regarding environmental impact of
F/A-18 Aircraft Materials
- (43) NAVSAFCEN NORFOLK VA Message DTG 081500Z JUN 87
regarding mishap site cleanup

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES
CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031
WHICH OCCURRED ON 07 MAY 1992.

PRELIMINARY STATEMENT

1. As directed by enclosure (1), per reference (a), a one officer JAG Manual Investigation was conducted to determine all facts and circumstances surrounding the mishap of F/A-18 aircraft Bureau Number (BUNO) 164031, modex 300, on 07 May 1992, which resulted in the death of the pilot, LCDR Kenneth F. McGuire.
2. A 14 day deadline extension was requested and approved (enclosures 2 and 3) on 08 June 92 in order to allow additional time for preparation of the Autopsy Report and Engineering Investigation by other sources.
3. The Investigating Officer was senior in rank to LCDR McGuire, and outside of his chain of command.
4. This investigation is submitted with no existing prejudices, pre-conceived opinions, or inclinations in judgment based upon any other findings by the concurrent mishap investigation.
5. No evidence, findings of fact, opinions, recommendations, or other parts of this investigation are classified. This report may be handled as with other unclassified material, but is not intended for casual distribution.
6. Salvage operations on aircraft BUNO 164031 have been completed. The aircraft impact site is located on uninhabited U.S. Forest Service Land approximately 7.5 nm southeast of Bishop, CA, and accordingly, claims or litigation against the United States are thought to be unlikely.
7. F/A-18 BUNO 164031 was destroyed upon impact. The data storage unit and mission computers were not salvageable, therefore the parameters of flight surrounding this mishap could only be estimated.

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8. Classified aircraft components and avionics from BUNO 164031 have been recovered or are assumed to have been completely destroyed as a result of ground impact and aircraft explosion. There is no reason to suggest any compromise of classified material.

9. Per reference (b), privacy act statements and legal warnings were not deemed necessary for witnesses and are not included.

10. Per reference (b), a line of duty/misconduct determination was not made due to the fatality of LCDR McGuire.

11. Legal advice during the course of this investigation was obtained from CDR (b) (6), JAGC, who is assigned to Strike Fighter Wing Pacific, Lemoore, CA.

12. I certify that all documents which are originals are authentic and that all enclosures which are photocopies are actual representations of the original authentic documents.

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED ON 07 MAY 1992.

FINDINGS OF FACT

1. The mishap pilot, LCDR Kenneth F. McGuire, USN, (b) (6) /1310 was on active duty attached to VFA-22 and was designated a Service Group One Naval Aviator. (Enclosure (4)).
2. LCDR McGuire was fully qualified for flight on 07 May 92. (Enclosures (5), (6), (7), (8)).
3. LCDR McGuire had accumulated a total of 3233 flight hours, 2175 of which were in the F/A-18. He had flown 119 hours in the previous 90 days, and 45 hours in the 30 day period preceding the mishap. (Enclosure (9)).
4. The mishap aircraft was an F/A-18C Lot 12, BUNO 164031, modex 300. (Enclosure (10)).
5. Aircraft BUNO 164031 had 814.9 total hours since new and was last flown on 06 May 92. (Enclosure (10)).
6. The last Functional Check Flight (FCF) was flown on 26 April 92 after incorporation of IPPC 79 in both engines. From 26 April 92 to 07 May 92, BUNO 164031 flew 17.5 hours. (Enclosure (10)).
7. BUNO 164031 had no downing discrepancies on the morning of the mishap. There were no outstanding aircraft discrepancies relevant to the mishap. A proper daily/turnaround inspection had been performed on BUNO 164031 prior to the mishap flight. (Enclosure (11)).
8. All technical directives which applied to the aircraft had been incorporated or were in compliance prior to the mishap flight. All phase and special inspections had been completed within the prescribed time frame. (Enclosure (12), (13)).

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED ON 07 MAY 1992.

9. LCDR McGuire signed the aircraft inspection and acceptance record ("A" sheet) certifying that he had reviewed the discrepancies for the ten previous flights. (Enclosure (11)).

10. BUNO 164031 was configured with five pylons, external fuel tanks on stations 3 and 5, and no external ordnance. (Enclosure (14)).

11. LCDR McGuire was scheduled as a single plane adversary (callsign BEEF 3) to oppose a second flight of four VFA-22 aircraft (callsign BEEF 2) on a low level navigation training sortie. The flight schedule was signed by the squadron Commanding Officer. (Enclosure (15)).

12. LCDR McGuire briefed with BEEF 2 flight (led by LCDR (b) (6)) at 0730 hours on the morning of the mishap. Rules of engagement for simulated attacks on the formation were covered. There was no discussion of specific flight profile for LCDR McGuire. (Enclosures (16), (17)).

13. LCDR McGuire (BEEF 3) took off at 0905 local and approximately 5 minutes ahead of BEEF 2 flight. (Enclosures (16), (17)).

14. LCDR McGuire checked in with Oakland Center at 0908L (13 nm from Lemoore), immediately cancelled his instrument clearance, then proceeded VFR at 17,500 ft MSL toward the Sierra Mountains. At 0918L, LCDR McGuire reported to Oakland Center that he was "descending and switching". (Enclosure (18)).

15. Radar track of BEEF 3 continued until 0918L at which time the radar controller removed this track from the system. Parameters of the last sweep were: location N3715.8 W118 52.6, altitude 17,500 ft MSL, groundspeed 296 knots. This location corresponds to a position over the central Sierra mountain range, 30nm west of the mouth of Black Canyon. (Enclosure (18)).

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED ON 07 MAY 1992.

16. Observed weather for Bishop airport at 0850 local on 07 May 92 was reported as 10,000 ft scattered, 15,000 ft scattered, visibility 40 nm, air temperature 69 degrees f, wind 310 degrees at 4 knots. (Enclosure (19)).
17. Retired Air Force Colonel (b) (6) (b) (6) flying a small civil aircraft near Bishop, observed BEEF 3 fly north in Owens Valley, then turn towards Black Canyon. He estimated the F/A-18's altitude at "perhaps 1000 ft AGL or lower." Moments later, Colonel (b) (6) noted a large black smoke plume from Marble Canyon and proceeded to the mishap site while reporting the crash via Bishop Airport Unicom. (Enclosure (20)).
18. Mr. (b) (6), a fisherman standing on the Owens River witnessed BEEF 3 fly over his position and enter the mouth of Black Canyon at an estimated altitude of 200 ft AGL. Mr. (b) (6) moved several yards and regained sight of BEEF 3 an instant before the second impact. (Enclosure (21)).
19. Maps of the mishap area showing the positions of the witnesses are included as enclosure (22).
20. Photographs of Black Canyon are included as enclosure (23). The terrain consists of steep, gravel and brush covered slopes, and sharp ravines with multi-colored rock.
21. Dr. (b) (6) (b) (6) an Emergency Room doctor from Bishop, and his wife, witnessed BEEF 3 flying low and fast up Black Canyon. Dr. (b) (6) and his wife were driving along the road in Black Canyon about 1 nm west of the mishap site. They could not see the impact site from their position. Dr. (b) (6) stated that the F/A-18 overflew his car at about 150 ft AGL. (Enclosures (22), (23)).
22. BEEF 3 disappeared from the (b) (6) view approximately 3 seconds before impact with the rock outcropping. The (b) (6) last viewed BEEF 3 in a

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level left turn, through the natural canyon bend, approximately 90 degrees angle of bank and trailing white vortices from the wing tips. (Enclosures (24), (25)).

23. BUNO 164031 impacted a rock outcropping at the mouth of Marble Canyon, approximately 150 ft above the canyon floor. Impact time was approximately 0925 local. A portion of the aircraft continued to a second and final impact uphill from, and approximately 300 yards beyond, the first impact. Several small brush fires were ignited as a result of the aircraft explosion. (Enclosures (24), (25)).

24. The aircraft mishap site is located at approximately 5700 feet above mean seal level in rugged, mountainous terrain at 37 17.5N 118 13.6W. This area is uninhabited U.S. Forest Service Land approximately 7.5 nautical miles SE of Bishop, CA, and 8 nm prior to VR 208 point Alpha. (Enclosures (22), (23)).

25. SAR was initiated out of NWC China Lake, CA by call sign COSO 35, a Navy HH-1 helicopter. COSO 35 arrived at the mishap site at approximately 1040 local. (Enclosure (26)).

26. The body of the pilot was discovered at approximately 1200L by the NWC SAR crew. A presumptive identification of LCDR McGuire was made at that time based on personal effects and flight gear markings. (Enclosure (26)).

27. Alignment of the two impact marks indicates an aircraft flight path pitch angle of approximately 20 degrees above the horizon. (Enclosure (27)).

28. Portions of the left wing, drop tank, and aft fuselage were located around the first impact point. The nose section and forward fuselage were located at the second impact area. (Enclosure (28)).

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29. Engineering investigations were conducted on various engine and hydraulic flight control components recovered from the mishap aircraft wreckage. The engines were turning at high RPM and all flight control components examined appeared to be operating normally at the time of impact. Flight surface positions at time of impact were assessed to be: (Enclosures (29) and (30)).

Right rudder: undeterminable

Left rudder: 16° trailing edge right

Left aileron: 16° trailing edge down

Right aileron: 25° trailing edge up

Right horizontal stabilator: 6° leading edge down

Left horizontal stabilator: undeterminable

30. Engineering investigation of ejection seat rocket motors and hardware indicates that LCDR McGuire made no attempt to eject. (Enclosure (30)).

31. From tests conducted in the F/A-18 flight simulator at 35000 lbs. gross weight, 5500 ft. MSL and 450 KCAS, the following data was obtained:

Maximum AOA attainable with full aft stick (7.5G) = Approx 10°

Minimum time to change FPA from +5° to +20° using full aft stick (7.5G) was approximately 2 seconds. (Enclosure (31)).

32. Calculations for time, distance and G in the canyon turn were made for various airspeeds. Using an airspeed of 450 KCAS and a turn radius of 3000 ft. (the maximum turn radius possible in the canyon), yields a turning G of 6.6 for the 60° turn. From the end of this turn to the first impact point is approximately 1.5 sec and 1200 horizontal feet. (Enclosure (32)).

33. At 450 KCAS, a 2 second pull-up maneuver requires approximately 1600 horizontal feet. (Enclosure (32)).

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED ON 07 MAY 1992.

34. The faces of the white rock outcroppings around the first impact point were in shadow at 0925L on 07 May 1992. Shadowing of these outcroppings causes them to blend with adjacent darker rock and the background, giving the casual appearance that the outcroppings are set farther away or are non-existent. (Enclosure (33)).

35. At a speed of 450 KCAS and altitude of 200 ft AGL, LCDR McGuire could not have seen the rock outcropping until he rounded the canyon bend approximately 4 seconds before impact. (Enclosure (32)).

36. The floor of Black Canyon rises approximately 200 vertical ft between the natural canyon bend and the mouth of Marble canyon (impact site) approximately 1/2 nm farther upstream. (Enclosure (22)).

37. In his 80 to 90 degree angle of bank left turn prior to impact, LCDR McGuire's radar altimeter would have registered its maximum of 5000 ft AGL or ranged off of the canyon wall on the outside of his turn, indicating 500 to 700 ft AGL. (Enclosure (31)).

38. The 72 hour history of LCDR McGuire preceding the mishap indicates no significant sociological, psychological or human factors relating to the mishap. LCDR McGuire took Sudafed medication for allergy on the afternoon before the mishap. (Enclosure (34)).

39. Autopsy of LCDR McGuire's remains indicated that cause of death was multiple blunt force injuries from high G impact. Toxicologic tests revealed the presence of Pseudoephedrine in LCDR McGuire's body. (Enclosure (35)).

40. The Autopsy report positively identified LCDR McGuire by fingerprint. (Enclosure (35)).

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES
CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031
WHICH OCCURRED ON 07 MAY 1992.

41. A Navy Flight Surgeon, reviewed the 72 hour history and toxicologic report for this investigation and assessed that the Pseudoephedrine found in LCDR McGuire's body tissue was residual from his ingestion of Sudafed tablets the day before, and would not have impacted his performance in the aircraft. (enclosure (36)).

42. BUNO 164031 received strike damage resulting from impact with the ground and subsequent explosion. (Enclosure (37)).

43. The aircraft mishap produced a short term public affairs response in the local community, including a front page newspaper article and a short segment on a local Bishop evening television talk show. (Enclosure (38)).

44. OPNAVINST 3710.7N, "Flight Rules for Naval Aircraft", paragraph 509 states "Except when necessary for takeoff and landing or when the mission of the flight requires otherwise, flights in fixed-wing aircraft shall not be conducted below an altitude of 500 ft above the terrain or surface of the water". (Enclosure (39)).

45. STRKFITRON22INST 3500.1, VFA-22 Standard Operating Procedures, states, for single aircraft, "flight below 1000 ft is not authorized except for takeoff, landing, weapons delivery, and NVG operations". (Enclosure (40)).

46. OPNAVINST 3710.7N paragraph 533 imposes a maximum aircraft indicated airspeed of 250 Knots below 10,000 ft MSL when operating outside of a Military Operating Area or the confines of a published low level training route. (Enclosure (41)).

47. Salvage of wreckage from BUNO 164031 was completed on 19 May 92 by the Mishap Investigation Team. Thirty-five tri-wall containers of recovered parts and material were removed from the mishap site and transported to

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES
CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031
WHICH OCCURRED ON 07 MAY 1992.

NAS Lemoore for analysis. All known pieces of wreckage and debris were removed from the mishap site. (Enclosure (31)).

48. Some of the debris from BUNO 164031 fell into a small creek in Marble Canyon. This creek disappears underground at the mouth of Marble Canyon. Several acres of land at the mouth of Marble Canyon is privately owned by Mr. (b) (6) of Bishop, CA. He expressed his intent to use Marble creek water in a future holding pond and questioned the mishap team members concerning possible contamination by residual hazardous material from the aircraft. (Enclosure (31)).

49. Informal research into the environmental impact of residual F/A-18 materials from aircraft mishap indicated that studies have been completed by the manufacturer, McDonnell Aircraft Corporation. The conclusion of these studies is that there is no hazard posed by the materials used in the F/A-18. (Enclosure (42)).

50. A 1987 message released by the Naval Safety Center addresses cleanup of aircraft wreckage containing carbon graphite composite material. The message states "No medical evidence of a significant health hazard associated with composite fiber material [released by fire] has been found," and "Composite fiber panels which fracture in aircraft crashes but are not subjected to fire have proven to be biologically benign." (Enclosure (43)).

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES
CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031
WHICH OCCURRED ON 07 MAY 1992.

OPINIONS

1. The mishap mission was properly authorized, scheduled and briefed. (Findings of Fact (11), (12)).
2. LCDR McGuire was fully qualified and proficient to conduct the briefed mission. (Findings of Fact (1), (2), (3)).
3. F/A-18 BUNO 164031 was functioning normally up to the time of impact. (Findings of Fact (7), (8), (29)).
4. LCDR McGuire descended over the Sierra Mountains, crossed Owens Valley, and entered Black canyon at approximately 200 ft AGL and 450 KCAS. (Findings of Fact (14), (15), (17), (18), (21)).
5. LCDR McGuire entered a 6 to 7G left turn as he passed over the rock promontory which marks the beginning of the Black canyon bend. From the point at which he started his turn, the canyon floor appeared relatively flat, and LCDR McGuire could not see what lay around the bend, only seconds ahead of him. (Findings of Fact (20), (22), (32), (35), (36)).
6. As he rounded the canyon bend, LCDR McGuire perceived his decreasing altitude and the closing canyon ahead and initiated a hard rolling pull-up to avoid the ground. His pull-up began approximately 2 seconds prior to impact on the rock outcropping. The flight path of the mishap aircraft in the final seconds preceding ground impact is depicted in figures 1, 2, and 3. (Findings of Fact (27), (31), (32), (33), (37)).
7. F/A-18 BUNO 164031 impacted a rock outcropping in a near wings level, nose up attitude as depicted in figure 4. The aircraft exploded upon contact with the rock outcropping. (Findings of Fact (23), (27), (28)).

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WHICH OCCURRED ON 07 MAY 1992.

8. LCDR McGuire was killed instantly when the aircraft impacted the rock outcropping. (Findings of Fact (26), (28), (30), (39)).

9. The most probable cause factor of the mishap is pilot error in that LCDR McGuire executed a high G, level turn around a canyon bend without knowledge of the terrain that lay only seconds ahead of him. LCDR McGuire did not recognize his worsening situation until after a point at which his aircraft performance was insufficient to prevent ground impact. (Findings of Fact (22), (31), (32), (33), (35), (36), (37)).

10. Visual illusions resulting from the combined effects of multi-colored rock, morning shadows, and a sloping canyon floor, existed at both the canyon bend and the first impact site. These illusions contributed to the mishap by delaying LCDR McGuire's recognition of the rising canyon floor and rock outcroppings for a brief, but critical, instant of time. (Findings of Fact (20), (34), (35), (36)).

11. LCDR McGuire was operating as a single aircraft during his transit through Black Canyon and, as such, was subject to all regulations for single aircraft low level flight. Black canyon is outside of controlled airspace and outside of the confines of a published military training route. LCDR McGuire violated the following regulations by intentionally flying at low altitude (below 500 ft AGL) and high speed (approx 450 KCAS) through Black canyon: (Findings of Fact (11), (18), (21), (24)).

OPNAVINST 3710.7N Para 509 and 533
STRKFITRON22INST 3500.1 Para 6.a.(2)

12. Proper adherence to the regulations listed above would have prevented the mishap. (Findings of Fact (44), (45), (46)).

13. Responsibility and accountability for this mishap rests with the pilot, LCDR McGuire. (Findings of Fact (23), (44), (45), (46)).

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WHICH OCCURRED ON 07 MAY 1992.

14. Due to the nearly complete disintegration and burning of the aircraft, unrecovered classified avionics and aircraft materials were completely destroyed and do not pose a security risk. (Finding of Fact (47)).

15. Every reasonable effort has been made to remove all aircraft materials and wreckage from the mishap site. There is no known hazard to the public from any residual material. (Findings of Fact (47), (49), (50)).

16. Because the aircraft crashed on uninhabited U. S. Forest Service Land, public claims or litigation against the government as a result of this mishap are unlikely. Future public interest regarding the environmental impact of this mishap remains possible. (Findings of Fact (24), (48)).

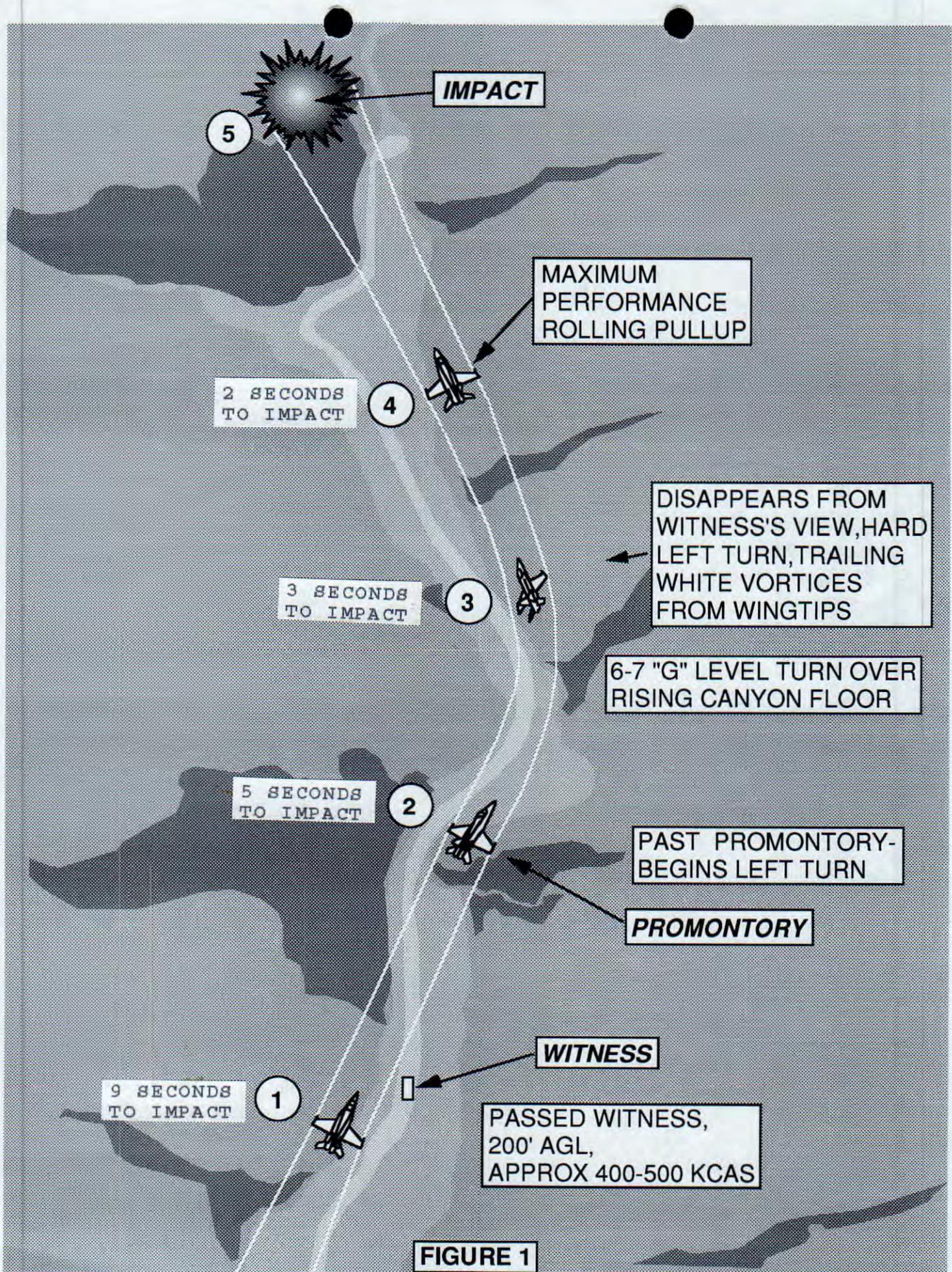


FIGURE 1

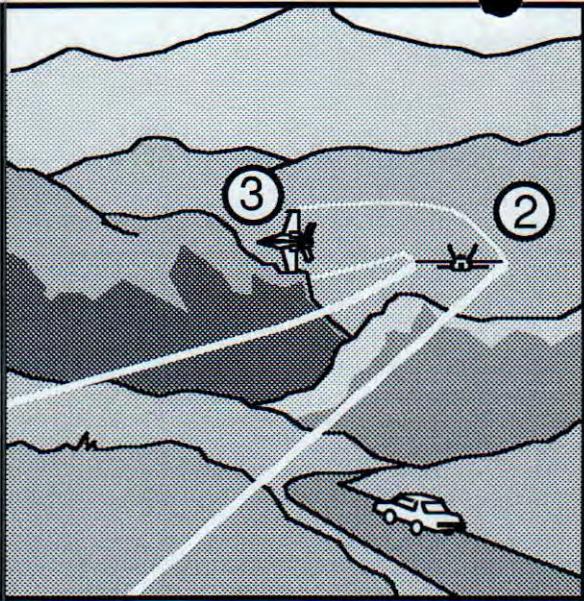


FIGURE 2

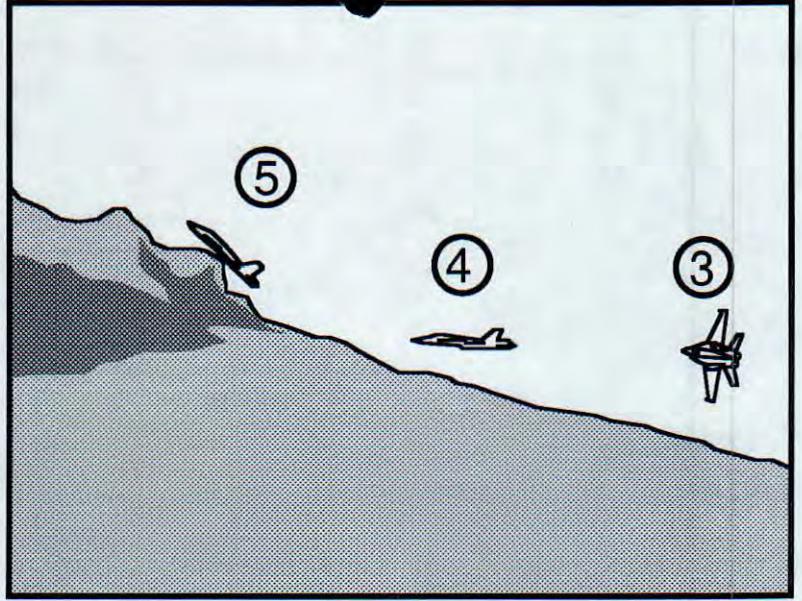


FIGURE 3

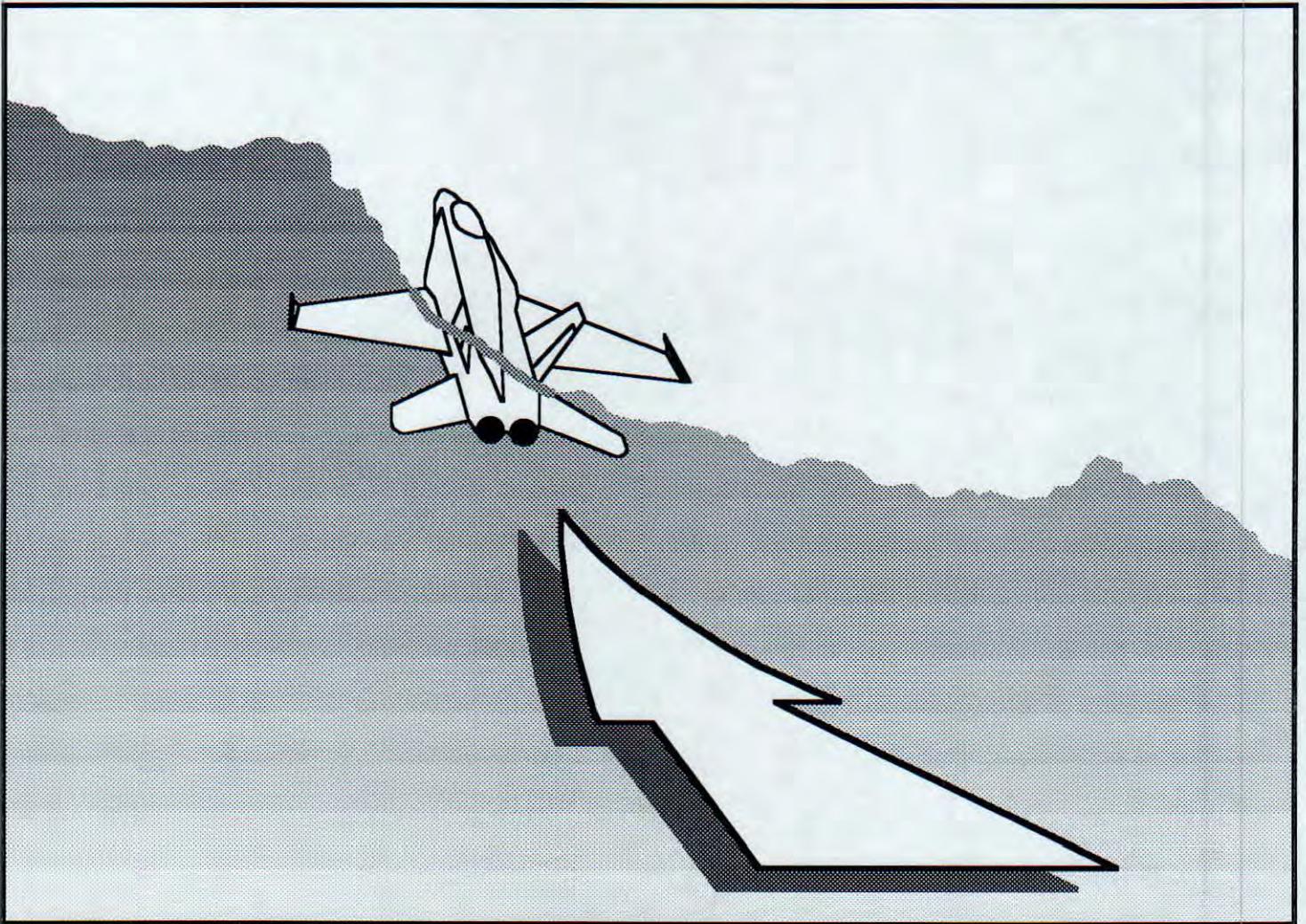


FIGURE 4

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES
CONNECTED WITH THE FLIGHT MISHAP INVOLVING BUNO 164031
WHICH OCCURRED ON 07 MAY 1992.

RECOMMENDATIONS

1. Forward this report to the Judge Advocate General in accordance with references (a) and (b).

(b) (6)

(b) (6)



DEPARTMENT OF THE NAVY
COMMANDER CARRIER AIR WING ELEVEN
UNIT 25120
FPO AP 96601-4408

5800
Ser 00/078
7 May 92

From: Commander, Carrier Air Wing 11
To: CDR (b) (6) S. (b) (6) USN, (b) (6) /1310

Subj: INVESTIGATION TO INQUIRE INTO THE CIRCUMSTANCES CONNECTED WITH THE
AIRCRAFT FLIGHT MISHAP INVOLVING BUNO 164031 WHICH OCCURRED ON 07 MAY
1992

Ref: (a) JAG Manual

1. This written appointment is in confirmation of my verbal orders of 07 May 1992 to conduct an informal investigation in accordance with Chapters II, VI, VIII and IX of reference (a) as soon as practicable, for the purpose of inquiring into all the circumstances connected with the aircraft flight mishap which occurred on 07 May 1992, resulting in the loss of BUNO 164031.
2. You will conduct a thorough investigation into all circumstances connected with said incident and report your findings of fact, opinions and recommendations as to the cause, the resulting damage, injuries to the members of the Naval Service and their line of duty and misconduct status, potential claims for or against the government, and responsibility for said incident, including any recommended administrative or disciplinary action.
3. You shall comply with the requirements set forth in sections 0306, 0308 and 0505 of reference (a) which pertain to warnings required before requesting statements regarding injury; compliance with the Privacy Act; and improper performance of duty. Any personnel suspected of an offense must be advised of their rights under Article 31, UCMJ. Your attention is further directed to provisions of sections 0817, 0901, 2002-2007, 2404, Chapter VIII and Appendix A-3-a of reference (a).
4. You are directed to forward your completed report not later than 08 June 1992. If, for any reason, the report cannot be forwarded within that period, report in writing the reason for the delay and estimated date of forwarding. This assignment has priority over all other regularly assigned duties.


D. W. GABRIEL

Encl ()
1 of 1

8 Jun 92

From: CDR (b) (6) S. (b) (6)
To: Commander, Carrier Air Wing Eleven

Subj: REQUEST FOR EXTENSION OF DEADLINE FOR JAG MANUAL
INVESTIGATION OF MISHAP ON 07 MAY 92

Ref: (a) Commander, CVW-11 Appointing Letter Ser 00/078
of 07 May 92
(b) JAG Manual

1. Reference (a) specifies a reporting deadline of 08 June 1992.
2. As of 08 June 1992, I have not received the autopsy/pathology report, or the engines engineering investigation response. Per reference (b), both of these documents are required enclosures to the JAG investigation.
3. Given the nature of this mishap, these documents are important to ensure completeness. In particular, the autopsy/pathology report is the primary means of legally identifying the deceased. Both documents are reportedly nearing completion and I expect to receive copies by 17 June 1992.
4. In light of the above, I respectfully request a 14 day extension of the report deadline.

Very respectfully,

(b) (6)

(b) (6)

CDR USN

Encl (2)
1 of 1

CLEARANCE NOTICE (Aero-Medical)

NAVMED 6410/2 (Rev. 6-78)
(Formerly NAVMED 1381) S/N 0105-LF 206-4110

DATE 19 MAR 92

FROM: (Ship or Station) NAUHOSP ANNEX NASL		TO: (Unit to which individual attached) COMMANDING OFFICER, VFA-22	
NAME (Last) MCGUIRE,	(First) KENNETH,	(Middle Initial) F.	GRADE/RATE LCDR
		SSN (b) (6)	BRANCH OF SERVICE USN

1. The above named individual has been found physically qualified and aeronautically adapted for duty involving flying in Class 2 OR SERVICE GROUP upon completing physical examination for:
- (1) (2) (3)
- Orders from Commanding Officer.
 - Check-in physical examination.
 - Following aircraft accident and/or incident.
 - Return from extended leave or absence from flying.
 - No BuMed approved Std. Form 88 present in individual's health record.
 - Return to duty involving flying from sick or grounded list.
 - Other (State reason for examination)
ANN. FLT. P.I.E.

DATE INDIVIDUAL GROUNDED	REASON FOR GROUNDED
--------------------------	---------------------

HEALTH RECORD MAINTAINED BY (Ship or Station) NAUHOSP ANNEX NASL ATTN: HM3 (b) (6)	EXPIRATION DATE OF CLEARANCE 19 MAR 93
---	---

Orig. to: CO

Copy to: Oper. Off. (also notify by phone)
Records Section (Entry made on NavMed 6150/2)
19 MAR 92 by BEK
(Date) (Initials)

D. (b) (6) E (b) (6)
LT MC USNR
(b) (6) CHT SURGEON AVME AVMO OTHER (Specify)

IF OTHER, RECEIVED CONCURRENCE FROM:
NAME _____
UNIT _____

★ U.S.GPO:1987-0-726-006/41613

NATOPS EVALUATION REPORT
11ND NASL (30) 3500/10 (11-78)

NAME (Last, first initial) McGUIRE, KENNETH F.		GRADE O-4	SSN (b) (6)
SQUADRON/UNIT STRKFITRON 22	AIRCRAFT MODEL FA-18C	CREW POSITION PILOT	
TOTAL PILOT/FLIGHT HOURS 2995	TOTAL HOURS IN MODEL 1950	DATE OF LAST EVALUATION 17 AUG 90	

NATOPS EVALUATION

REQUIREMENT	DATE COMPLETED	GRADE		
		Q	CQ	U
OPEN BOOK EXAMINATION	27 AUG 91	Q		
CLOSED BOOK EXAMINATION	27 AUG 91	Q		
ORAL EXAMINATION	28 AUG 91	Q		
*EVALUATION FLIGHT	28 AUG 91	Q		
FLIGHT DURATION 1.8	AIRCRAFT SUNC 164062	OVERALL FINAL GRADE QUALIFIED		

REMARKS OR EVALUATOR/INSTRUCTOR

LCDR McGUIRE FLEW A LOW LEVEL SORTIES OVER SAUDI ARABIA. AREAS EVALUATED INCLUDED PREFLIGHT BRIEF, AIRCRAFT PREFLIGHT, DECK PROCEDURES, FLIGHT PROCEDURES AND SIMULATED EMERGENCIES. ALL ASPECTS OF THE FLIGHT WERE CONDUCTED SAFELY AND WERE PER NATOPS.

EXPIRES 31 AUG 92

CHECK IF CONTINUED ON REVERSE SIDE

GRADE	NAME OF EVALUATOR/INSTRUCTOR LCDR D. E. (b) (6), USN	SIGNATURE (b) (6)	DATE 29 AUG 91
GRADE	NAME OF EVALUEE LCDR K. F. McGUIRE, USN	SIGNATURE <i>[Signature]</i>	DATE 29 AUG 91

REMARKS UNIT COMMANDER

RANK	NAME OF UNIT COMMANDER CDR G. R. DARWIN, CO	SIGNATURE <i>[Signature]</i>	DATE 29 AUG 91
------	--	---------------------------------	-------------------

*WST, OFT, COT, or cockpit check in accordance with OPNAVINST 3510.9F

Encl (6)
1 of 1

NATOPS INSTRUMENT RATING REQUEST
 OPNAV 3710/2 (REV. 1-74) S/N 0107-LF-728-2903

REF: OPNAVINST 3710.7 SERIES
 OPNAVINST 3510.9 SERIES
 NATOPS INSTRUMENT FLIGHT MANUAL

NAME (Last, First, Middle Initial) **McGUIRE Kenneth F.** GRADE **LCDR** **(b) (6)** DATE **11 Dec 1991**

UNIT **VFA-22**

APPLICATION IS HEREBY MADE FOR AN INSTRUMENT RATING (Check one)
 STANDARD SPECIAL

EXPERIENCE SUMMARY

MISCELLANEOUS SUMMARY			INSTRUMENT PILOT TIME			
ITEM	LAST 6 MO.	LAST 12 MO.	ITEM	PAST 12 MO.	LAST 6 MO.	TOTAL ALL YEARS
PRECISION APPROACHES	47	81	ACTUAL	75.2	29.8	258.4
			SIMULATED	2.3	2.0	296.9
NON-PRECISION APPROACHES	6	6	INSTRUMENT PILOT TIME TOTAL	77.5	31.8	555.3
			TOTAL YEARS FLYING EXPERIENCE (Military and Commercial)	10		

TOTAL PILOT TIME **3115**

AIRCRAFT QUALIFICATIONS

F/A-18

CURRENT RATING

SPEC

PILOT'S BIRTHDAY

23 FEB 59

SIGNATURE OF APPLICANT

[Signature]

THIS IS TO CERTIFY THAT THE APPLICANT HAS ...
 SATISFACTORILY UNSATISFACTORILY
 ... COMPLETED THE WRITTEN EXAMINATION FOR AN INSTRUMENT RATING AS REQUIRED BY THE NATOPS INSTRUMENT FLIGHT MANUAL.

1ST EXAM (Grade)	2ND EXAM (Grade)	3RD EXAM (Grade)
Q	Q	

Grade, **LT**
 UNIT **VFA-125** DATE **11 Dec 1991**

FLIGHT EVALUATION	PART ONE (Basic Instruments)		PART TWO (Instrument Flight within control areas with emphasis on VOR, TACAN where feasible)	
	QUAL	UNQUAL	QUAL	UNQUAL
1 INSTRUMENT TAKEOFF (Optional)	X		1 FLIGHT PLANNING	X
2 CLIMBING, DESCENDING AND TIMED TURNS	X		2 CLEARANCE COMPLIANCE	X
3 STEEP TURNS	X		3 INSTRUMENT APPROACHES	X
4 RECOVERY FROM UNUSUAL ALTITUDES	X		4 COMMUNICATIONS AND NAVIGATION EQUIPMENT	X
5 VOR/TACAN POSITIONING	X		5 EMERGENCY PROCEDURES	X
6 PARTIAL PANEL AIRWORK	X		6 VOICE PROCEDURES	X
7 ADF/MDF ORIENTATION	X			

*Not required when evaluation is conducted under actual instrument conditions.

REMARKS

QUALIFIED IAW OPNAVINST 3710.7

DATE OF FLIGHT CHECK 6 FEB 92	AIRCRAFT MODEL 2F-132	BUNO 000001	INSTRUMENT RATING ISSUED <input type="checkbox"/> STANDARD <input checked="" type="checkbox"/> SPECIAL	(Expires) 28 FEB 93
SIGNATURE OF FLIGHT EXAMINER (Grade and Date) <i>C. R. RONDESTVEDT</i>			SIGNATURE OF OFFICER ISSUING CARD TO APPLICANT <i>C. R. RONDESTVEDT</i>	

Encl (7)
 1 of 1

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET

OPNAV 3760/32F (4-81) SN 0107-LF-736-2170

SECTION IIIB - OPERATIONAL PHYSIOLOGY & SURVIVAL TRAINING

NAME (Last, first, middle initial) McGUIRE, K.E. RANK/RATE (b) (6) SSN (b) (6)

COURSE CATEGORY	TYPE OF TRAINING											
	AVIATION PHYSIOLOGY			EMERGENCY EGRESS			WATER SURVIVAL			LAND SURVIVAL, DWEST, SERE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
	12 MAY 81	P	1	5 FEB 82	P	4	20 MAY 81	P	1			
	SIGNATURE (b) (6)			SIGNATURE (b) (6)			SIGNATURE (b) (6)			SIGNATURE		
REFRESHER TRAINING IAW OPNAVINST 3710.7 SERIES HEED DROP JET	FEB 81	Q	1									
	SIGNATURE (b) (6)			SIGNATURE			SIGNATURE			SIGNATURE		
T-2 ROCKEET SEAT DYNAMIC STATO FC LEH				FEB 03	Q	1						
	SIGNATURE			SIGNATURE (b) (6)			SIGNATURE			SIGNATURE		
SERE: COMPLETED <input checked="" type="checkbox"/> INCOMPLETE <input type="checkbox"/>				19 SEP 84	Q	25		20	JUL	1984	S	16
	SIGNATURE			SIGNATURE RDA			SIGNATURE			SIGNATURE (b) (6)		
DEST: COMPLETED <input checked="" type="checkbox"/> INCOMPLETE <input type="checkbox"/>								20	JUL	1984	S	16
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE (b) (6)		
REFRESHER: (R1, R2, R3, R4) CQ UNQUAL INCOMPLETE P							28 MAR 85	Q	5			
	SIGNATURE			SIGNATURE			SIGNATURE (b) (6)			SIGNATURE		
SJU-5/A (LECT/SHOT) SJU-8/A (LECT/SHOT) ESCAPAC (LECT/SHOT)				27 SEP 85	Q	5						
	SIGNATURE			SIGNATURE (b) (6)			SIGNATURE			SIGNATURE		
DWEST KTA DWEST (BROUGHT FWD)							5/20/81	P	1	20 MAY 81	P	1
	SIGNATURE			SIGNATURE			SIGNATURE (b) (6)			SIGNATURE (b) (6)		

TRAINING ACTIVITIES

1. Pensacola, FL	8. Barbers Point, HI	15. Brunswick, ME
2. Miramar, CA	9. Cecil Field, FL	16. FASOTRAGRUPAC
3. Norfolk, VA	10. Cherry Point, NC	17. FASOTRAGRULANT
4. Corpus Christi, TX	11. Whidbey Island, WA	18. MCAS New River, NC
5. Lemoore, CA	12. Beaufort, SC	19. Okinawa
6. El Toro, CA	13. Point Mugu, CA	20. Other (List)
7. Jacksonville, FL	14. Patuxent River, MD	21.

Encl (8)
1 of 4

NATOPS FLIGHT PERSONNEL TRAINING/QUALIFICATION JACKET
OPNAV 3760/32F (4-81) SN 0107-LF-736-2170

SECTION IIIB - OPERATIONAL PHYSIOLOGY & SURVIVAL TRAINING

NAME (Last, first, middle initial) MCGUIRE, KENNETH F. RANK/RATE LT SSN (b) (6)

COURSE CATEGORY	TYPE OF TRAINING											
	AVIATION PHYSIOLOGY			EMERGENCY EGRESS			WATER SURVIVAL			LAND SURVIVAL, DWEST, SERE		
	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT	DATE	GRADE	UNIT
				6 JAN 86	Q	5						
	SIGNATURE			SIGNATURE (b) (6)			SIGNATURE			SIGNATURE		
				11 DEC 88	Q	5						
	SIGNATURE			SIGNATURE (b) (6)			SIGNATURE			SIGNATURE		
SJU-5/A/LECT/SHOT SJU-8/A/LECT/SHOT ESCAPAC/LECT/SHOT												
	SIGNATURE			SIGNATURE (b) (6)			SIGNATURE			SIGNATURE		
(25000) (TYPE I MOD) (CHAMBER PROFILE) VISUAL PROBLEMS WITH DEMO V ✓ S ✓ F ✓				18 FEB 1987	Q	5						
	SIGNATURE (b) (6)			SIGNATURE (b) (6)			SIGNATURE			SIGNATURE		
				NOV 04 1987	Q	5						
	SIGNATURE			SIGNATURE (b) (6)			SIGNATURE			SIGNATURE		
SJU-5 ANNUAL SEAT LECTURE												
	SIGNATURE			SIGNATURE (b) (6)			SIGNATURE			SIGNATURE		
Emergency Egress Training F/A-18				4 JAN 89	Q	5						
	SIGNATURE			SIGNATURE (b) (6)			SIGNATURE			SIGNATURE		
AV PHYS REFRESHER												
TAC PROP HELO QUAL LECT ONLY												
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
MARTIN BAKER												
LECT ROAD ANN												
	SIGNATURE			SIGNATURE			SIGNATURE			SIGNATURE		
REFRESHER (R1, R2, R3) Q ✓ CO UNQUAL INCOMPLETE AI												
	SIGNATURE			SIGNATURE			SIGNATURE (b) (6)			SIGNATURE		

TRAINING ACTIVITIES

1. Pensacola, FL	8. Barbers Point, HI	15. Brunswick, ME
2. Miramar, CA	9. Cecil Field, FL	16. FASOTRAGRUPAC
3. Norfolk, VA	10. Cherry Point, NC	17. FASOTRAGRULANT
4. Corpus Christi, TX	11. Whidbey Island, WA	18. MCAS New River, NC
5. Lemoore, CA	12. Beaufort, SC	19. Okinawa
6. El Toro, CA	13. Point Mugu, CA	20. Other (List)
7. Jacksonville, FL	14. Patuxent River, MD	21.