



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON DC 20350

[REDACTED]
UNCLASSIFIED
28 June 1982

[REDACTED] -- unclassified upon removal or deletion of classified material identified in para. 2 below

TENTH ENDORSEMENT on CAPT
5830 of 30 Jun 1981

1, USN, ltr CCG4:PEJ:oji

From: Chief of Naval Operations
To: Judge Advocate General
Via: Secretary of the Navy

Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring onboard the USS NIMITZ (CVN-68) on 26 and 27 May 1981 involving EA-6B aircraft, BUNO 159910, from Marine Tactical Electronic Warfare Squadron TWO

Ref: (b) OPNAVINST 5510.1F (Department of the Navy Information Security Program Regulation)

1. Readdressed and forwarded for classification approval in accordance with the provisions of paragraph 5-105(6)(f) of reference (b).

2. A classification review of the investigation has been conducted in order to remain consistent with the reason for the classification of enclosure (235), as set forth in enclosures (237) and (238). The determinations of this review are as follows:

a. Items classified confidential in accordance with OPNAVINST 5510.1F:

(1) Enclosure (3), and finding of fact 115. All correlation of propeller turn count to ship's speed.

(2) Enclosure (5), pages 2 and 3. All reference to ships speed in excess of 30 knots.

b. Items to be withheld under the Navy Nuclear Power Program restrictions:

(1) Enclosure (3), fifth page, lines 7 thru 13.

(2) Enclosure (73), first page, line 7

(3) Enclosure (104), page 2-1-13-4, first paragraph, line 2

c. Items which, when compiled, constitute confidential information under the authority of sections 1-301(a) and 1-302 of Executive Order 12065.

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- (1) Preliminary statement, page 11, para c.
- (2) Findings of fact 34, 35, 37, 38, 39, 40, 41, 45, 53, 56, 62, 63, 64, 67, 104.
- (3) Opinions 16, 17, 18, 21, 32, 43
- (4) The following identified portions of enclosures:
- (a) Enclosure (3), page 16, lines 9 thru 16
 - (b) Enclosure (11), page 3, lines 9 thru 19
 - (c) Enclosure (15), page 2, lines 4 thru 35; page 4, lines 18 thru 21, 24, 40, and 41; diagram in page 5.
 - (d) Enclosure (16), page 1, last six lines; page 2, lines 1 thru 5, 8 thru 13.
 - (e) Enclosure (39), page 2, lines 30 thru 36
 - (f) Enclosure (40), page 1, lines 17 thru 22
 - (g) Enclosure (59), page 1, lines 4 thru 16
 - (h) Enclosure (60), page 1, line 14, 16 thru 18.
 - (i) Enclosure (61), page 1, lines 9 thru 18
 - (j) Enclosure (62), COMNAVAIRLANT msg 121057Z JUN 81 is for "Official Use Only".
 - (k) Enclosure (63), photo mosaic of aircraft flight path.
 - (l) Enclosure (64), page 1, lines 13 thru 28; page 2, lines 12 thru 15, 32 thru 41; page 3, lines 20 thru 25.
 - (m) Enclosure (65), page 5, lines 30 thru 33, 36, 37; page 7, lines 1, 2, 13 thru 16; page 15, lines 24 thru 34; page 17, lines 20, 21; page 18, line 17.
 - (n) Enclosure (66), page 14, entire last para; page 15, lines 2, 3, 5 thru 9, 29 thru 31, 33, 34.
 - (o) Enclosure (67), page 1, lines 1 thru 3, 10 thru 16.
 - (p) Enclosure (72), page 1, lines 21 thru 27, 35 thru 40; page 2, lines 9 thru 16, 33 thru 37, 41 thru 43.

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(q) Enclosure (73), page 2, lines 19 thru 24, 39 thru 42; page 3, line 1, 22 thru 35; page 4, lines 5 thru 8; page 15, lines 1 thru 6, 9 thru 32.

(r) Enclosure (75), page 7, photo.

(s) Enclosure (81), page 4, lines 21 thru 27, 30 thru 32; page 6, last line; page 7, lines 1 thru 10, 19, 20; page 8, last three lines; page 9, lines 1 thru 15, page 10, lines 12 thru 18; page 14, last five lines.

(t) Enclosure (97), page 1, lines 11 thru 18, 24 thru 29; photo enclosure.

(u) Enclosure 98), page 1, lines 5 thru 12; photo enclosure.

(v) Enclosure (100), page 4, lines 9 thru 16; page 7, lines 7 thru 9; page 8, lines 27 thru 29; page 13, lines 11 thru 27.

(w) Enclosure (103), page 1, lines 21 thru 27.

(x) Enclosure (109), page 2, lines 1 thru 9; page 3, lines 29, 30; page 5, lines 32 thru 35; page 7, lines 5 thru 18.

(y) Enclosure (114), page 1, lines 4 thru 13.

(z) Enclosure (174), second page, accident narrative para., lines 5 thru 12 and diagram contained in enclosure (1).

(aa) Enclosure (180), second page, accident narrative para., lines 5 thru 12 and diagram contained in enclosure (1).

(bb) Enclosure (229), page 2, lines 7 thru 24.

(cc) Enclosure (230), page 1 of addendum, last three lines; page 2 of addendum, lines 1, 2, 5 thru 13, 19 thru 22.

(dd) Enclosure (232), page 1, lines 6 thru 8.

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COMCARGRU FOUR
CO, USS NIMITZ (CVN-68)

ADMIRAL, U.S. NAVY
VICE CHIEF OF NAVAL OPERATIONS

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DEPARTMENT OF THE NAVY
OFFICE OF THE JUDGE ADVOCATE GENERAL
290 STOVALL STREET
ALEXANDRIA, VA 22332

IN REPLY REFER TO
JAG:21.1:CBS:tdr
CF-221-81

19 APR 1982

NINTH ENDORSEMENT on CAPT
of 30 Jun 1981

USN, ltr CCG4:PEJ:oji 5830

From: Judge Advocate General
To: Chief of Naval Operations (OP-00J)

Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring onboard the USS NIMITZ (CVN-68) on 26 and 27 May 1981 involving EA-6B aircraft, BUNO 159910, from Marine Tactical Electronic Warfare Squadron TWO

Ref: (b) NAVY JAG ALEXANDRIA VA MSG 152142Z APR 82

Encl: (237) Affidavit of SECNAV dated 14 April 1982
(238) Affidavit of CDR Keith J. Weal, USN, NAVSEASYS COM dated 14 April 1982

1. Forwarded for classification review in order that a determination may be made as to what portions, if any, must be classified, consistent with the reason for the classification of enclosure (235), as set forth in enclosures (237) and (238).
2. Reference (b) provisionally classified the basic investigative report with endorsements, in its entirety, pending classification review.
3. It is requested that the basic investigative report with endorsements be returned to this Office by endorsement upon completion of action.

By direction

Copy to:
CMC
CINCLANTFLT
CHNAVMAT
COMNAVAIRPAC
COMNAVAIRLANT
COMNAVSEASYS COM
COMNAVAIRSYS COM
COMCARGRU FOUR
CO, USS NIMITZ (CVN-68)

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(S)

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IN THE UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF COLUMBIA

Plaintiff)
)
v.) Civil Action No. 82-0024
)
DEPARTMENT OF THE NAVY,)
Defendant.)
)
)
_____)

AFFIDAVIT

Affiant, first being duly sworn, states and affirms as follows:

1. I am _____, and, as the Secretary of the Navy, I am the head of the Department of the Navy.
2. I am familiar with the captioned-action in which the plaintiff seeks access to audio/visual recordings and photographs of the aviation mishap which occurred on board the USS NIMITZ (CVN 68) on May 26, 1981. Exemption is claimed only for the audio/visual recording (PLAT tape) as described below.
3. I have personally reviewed the only audio/visual recording in existence concerning the mishap in question, which is known as the Pilot Landing Aid Television (PLAT) tape. That PLAT tape resulted from the routine filming on video tape of the aircraft landings on board U.S. Navy aircraft carriers during flight operations. A PLAT tape, as its name implies, is designed to provide naval and marine corps aviators and naval personnel whose duties relate to carrier flight operations with a pictorial and audio training aid to improve naval flight operations on board aircraft carriers. Two cameras, one located in the center line of the flight deck facing the stern of the ship and the other located on the ship's island (the superstructure rising above the ship's flight deck), film all landings and takeoffs from aircraft carriers. These films are viewed live by various shipboard personnel with responsibilities for air operations and reviewed by the pilot concerned and other servicemembers with responsibilities for air operations for the purposes of monitoring, reviewing, critiquing, and improving carrier air operations. The PLAT tape in question was made for these reasons.

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enclosure (237) 6

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4. This PLAT tape, filmed initially by a flight deck camera, commences at time 2347:56, as aircraft number 610 begins its final approach for landing. ~~Due to darkness, the aircraft is not discernible on the film until 2350:17.~~ The routine radio communications between the aircraft and the carrier, however, are audible. These radio communications consist of the aircraft's fuel state, its distances from the carrier, and a report of having the "meatball" (lighted glide path) in sight. At time 2350:17 the aircraft's wing lights and landing lights become discernible. During the time 2350:17 until 2350:22 the aircraft comes into view and is seen briefly in the camera landing cross-hairs as it attempts touch-down. From approach time 2350:32 until the conclusion, the tape was filmed entirely by a second camera located on the island (super structure) of the NIMITZ. This portion of the tape shows the touch-down of the aircraft, including the aircraft's path on the flight deck and its impacts with other aircraft and objects on the flight deck, the sounding of the aircraft collision alarm, followed by the general quarters alarm, the explosions, fire, and fire-fighting efforts. At time 0019:54, after the fire had been brought under control a missile in the wreckage explodes resulting in further casualties and the renewal of the fire. Additional fire-fighting efforts brought that fire under control. Additionally the verbal commands to firefighting parties, as broadcast by the carrier's public address system to the flight deck, are audible throughout this segment of film.

5. Because of shipboard storage limitations PLAT tapes are generally erased and reused shortly after they are viewed on-board carriers; therefore, given the temporary nature of these tapes and since they were to be used largely within the environs of a carrier, formal classification reviews of such tapes are not performed when they are created. In fact, the tape in issue would most likely have been erased and reused if it had not captured on film this aircraft mishap and therefore was of value to naval personnel investigating the circumstances surrounding that mishap. These naval personnel were preoccupied at the time not only with conducting these investigations to determine the mishap's cause or causes but also with Congressional hearings held as a result of the NIMITZ incident. In accordance with the routine conduct of such investigations, it was expressly understood that the tape and other evidentiary material would not be publicly disclosed at least during the course of the investigation. For this reason all informal and formal public requests for access to such evidentiary materials were held in abeyance pending completion of the investigation. During this time, this tape and other evidentiary materials

were maintained in a secure manner. As the investigations wound to a close the question of the tape's public disclosure, prompted in large part by plaintiff's FOIA request, now had to be addressed.

As a result of my earlier review, I became concerned that the tape contained classified information and directed that a comprehensive security review be performed. As noted below, my concern was justified. Additionally, I have directed that naval classification regulations be reviewed, and modified if necessary, to establish guidelines for the classification of PLAT tapes prepared in the future.

6. I recognize that general information describing the mishap was released in the form of after-the-fact descriptions of the crash and the ensuing fire-fighting effort, as well as some still photographs of the aftermath. Numerous other still photographs are available for public release. The PLAT tape in question, however, is the only known contemporaneous motion picture recording of this night-time mishap that could be subjected to a frame-by-frame "real time" analysis.

7. Air operations on our carriers represent over 60 years of accumulated experience of this country's naval aviation. PLAT tapes, and specifically the tape at issue, capture on film detailed aspects of this country's sea-based flight operations. The tapes of those operations, including the landing shown in the instant tape, record launches and recoveries from the flight decks of our carriers in all types of weather and during all hours of the day. They portray some of the world's most advanced jet aircraft with their correspondingly advanced weapons systems and electronic equipment. None of this country's allies or its adversaries have the type of "super carrier" that is used by our Navy, nor do they have the capability to engage in the "all-weather all-hours" carrier flight operations performed by naval and marine corps aviators and our shipboard personnel.

8. Should this PLAT tape be required to be released to members of the public, its disclosure will give unfriendly foreign powers the ability, not only to improve their own naval air operations, but to gain valuable insight into the operational capability of this nation's several carriers.

9. After having personally reviewed the PLAT tape in question in my judgment and for the reasons stated in the classified affidavit of B6, Commander, USN, which will be submitted in camera, I have authorized that that portion of this tape which commences at

time 2350:23 and ends at time 0050:07 be classified CONFIDENTIAL in the interest of national defense, because the release of that portion of the tape would reveal by means of a frame-by-frame analysis details of the operational capabilities of this nation's super carriers and could cause thereby identifiable damage to the national security.

10. Pursuant to paragraph 3-303 of Executive Order 12065, I have determined that the public interest in disclosure of the PLAT tape in question does not outweigh the damage to the national security that might reasonably be expected from disclosure.

11. Accordingly, and for the reasons previously stated, I claim that the aforementioned 59 minutes 44 seconds of the PLAT tape in question are classified in the interests of national security and are therefore exempt from disclosure pursuant to 5 U.S.C. § 552(b) (1). The initial two minutes and 27 seconds of the tape and numerous still photographs of the mishap are not classified and may be made available.

FURTHER, AFFIANT SAYETH NOT.

I declare under penalty of perjury that the foregoing is true and correct.

Bl
SECRETARY OF THE NAVY

April 14, 1982

IN THE UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF COLUMBIA

Bl
Plaintiff

v.

DEPARTMENT OF THE NAVY,

Civil Action No. 82-0024

AFFIDAVIT

Affiant, first being duly sworn, states and affirms as follows:

1. (U) I am *Bl* Commander, United States Navy. I am a designated Naval Aviator with four carrier deployments. I was awarded an M.S. in Aeronautical Engineering in 1975. I am presently an Aeronautical Engineering Duty Officer serving in the Office of the Program Manager for Carrier Acquisition (PMS 392) of the Naval Sea Systems Command. I have twice successfully completed the Navy aircraft carrier Fire-fighting course. The statements herein are based upon knowledge, upon my personal review of information available to me in my official capacity, and upon conclusions reached in accordance therewith.

2. (U) I have personally examined the PLAT tape in question, which begins approximately at time 2347:56 and ends at 0050:07. This reflects the actual military time of the taped events that occurred aboard the USS NIMITZ in the late hours of May 26, 1981 at 11:47p.m. (plus 56 seconds) through the early morning hours of May 27, 1981 until 12:50a.m. (plus 7 seconds).

3. (U) Based upon my thorough review of the PLAT tape, it is my opinion that the tape, commencing at time 2350:23 until its conclusion, reveals information about certain military operations the disclosure of which would cause identifiable damage to the national security and is therefore classifiable in accordance with Section 1-301(a) and 1-302 of Executive Order 12065. My conclusion is based on the following:

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enclosure (238)

~~_____~~
~~_____~~
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4. (U) I am aware that the aircraft mishap aboard the USS NIMITZ received extensive media attention. Much of what was reported, however, was based on general information provided by the navy to the media after the mishap. This PLAT tape, which could be subjected to a "real time" frame-by-frame analysis, would reveal additional details of the mishap that were not released for public dissemination.

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10. (U) While it is generally known that air operations were interrupted for approximately 30 minutes, it is not known what totality of factors contributed to this time; whether it is considered a satisfactory or unsatisfactory time; and whether it is repeatable and has predictive value. Such detailed information useful in evaluating the significance of grosser information already known could provide significant intelligence insights that could damage the national security by revealing the level of our capability under actual operational conditions to effectively recover and resume normal operations following an interruption resulting from an attack.

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██████████ (13)

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13. (U) It is my opinion that disclosure of this segment of the PLAT tape recording in context with prior official public statements concerning this accident could cause identifiable damage to the national security.

FURTHER, AFFIANT SAYETH NOT.

I declare under penalty of perjury that the foregoing is true and correct.

Bl

COMMANDER, U. S. NAVY

April 14, 1982

Classified by OPNAVINST S5513.3 (Enclosure 1).

Declassify on: may 26, 1987.

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DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350

IN REPLY REFER TO
Ser 00/300048
3 February 1982

[REDACTED]
EIGHTH ENDORSEMENT on CAPT *B6*, USN, ltr COG4: PEJ/oji 5830
of 30 Jun 1981

From: Chief of Naval Operations
To: Judge Advocate General

Subj: Investigation to inquire into the facts and circumstances concerning
an accident and subsequent events occurring onboard the USS NIMITZ
(CVN-68) on 26 and 27 May 1981 involving EA-6B aircraft, BUMO 159910,
from Marine Tactical Electronic Warfare Squadron TWO

1. Returned.
2. The Sixth Endorsement has been reviewed. The comments contained therein are in consonance with investigating officer's opinions that there were factors, in addition to pilot error, which contributed to the accident.

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COMCARGRU FOUR
CO, USS NIMITZ (CVN-68)
CAPT *B6*, USN

[REDACTED]
(15)



DEPARTMENT OF THE NAVY
OFFICE OF THE JUDGE ADVOCATE GENERAL
200 STOVALL STREET
ALEXANDRIA, VA 22332

IN REPLY REFER TO
JAG:004A:SBK:dm
19 January 1982

~~XXXXXXXXXX~~
SEVENTH ENDORSEMENT on CAPT *BL*
of 30 Jun 1981

JSN, ltr CCG4:PEJ/oji 5830

From: Judge Advocate General
To: Chief of Naval Operations (OP 00J)

Subj: Investigation to inquire into the facts and circumstances concerning
an accident and subsequent events occurring onboard the USS NIMITZ
(CVN-68) on 26 and 27 May 1981 involving EA-6B aircraft, BUNO 159910,
from Marine Tactical Electronic Warfare Squadron TWO

1. Forwarded for your information and action, if any, you deem appropriate.

BL

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DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380

IN REPLY REFER TO
CMC:dhm

13 DEC 1981

SIXTH ENDORSEMENT on Capt ^{Bl}
5830 of 30 June 1981

USN, Itr CCG4:PEJ/oji

From: Commandant of the Marine Corps
To: Judge Advocate General

Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring onboard the USS NIMITZ (CVN-68) on 26 and 27 May 1981 involving EA-6B aircraft, BUNO 159910, from Marine Tactical Electronic Warfare Squadron Two

1. Forwarded.
2. In reviewing the basic investigation, together with all endorsements thereto, there are significant elements which demand elaboration:

a. The first and most significant is the pilot himself. First Lieutenant Steve E. WHITE's record and professional reputation with his peers and seniors, both as a Naval Aviator and as a Marine, are impeccable. At no time during his career as a Marine officer did he manifest any traits which were not in keeping with the highest traditions of our Naval Service. If, indeed, First Lieutenant WHITE treated his cold with non-prescription brompheniramine (a common antihistamine decongestant cold medicine ingredient) and aspirin, as the levels of these in his system would suggest, his prior record indicates that he may have done so with the most honorable of all motivations that we in our profession know--successful completion of his assigned mission. What is not clearly established is when and where First Lieutenant WHITE took non-prescription brompheniramine and aspirin, and whether or not he was fully aware of their normal side effects. A case could be made that First Lieutenant WHITE's system had a high tolerance to non-prescription brompheniramine and aspirin, and the side effects would be minimal. In any case, medical opinions relative to side effects should be viewed as clinical evaluations based on normal reactions, and therefore possess a degree of subjectivity. The foregoing is not meant to exonerate First Lieutenant WHITE if, in fact, he self-administered non-prescription medication for a cold in violation of regulations. Rather, it is meant to clearly establish the nature of the medications and his reasons for their use.

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Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring onboard the USS NIMITZ (CVN-68) on 26 and 27 May 1981 involving EA-6B aircraft, BUNO 159910, from Marine Tactical Electronic Warfare Squadron Two

b. Conclusion 49 of the basic investigation states categorically that: "The presence of this drug in the pilot combined with other stress factors present precipitated the pilot error which caused this accident." This highly subjective conclusion does not give appropriate consideration to: (1) Opinion 7, "The line-up corrections flown by 1stLt WHITE for most of the approach were appropriate."; (2) Opinion 9, "The coordinated monitoring of the LSO platform's PLAT, combined with a trained interpretation of the video, would have identified the requirement for a timely line-up correction call to the pilot of 610. This could have prevented the accident." (underscore provided); (3) Opinion 14, "Contributing to the accident was the lack of a line-up call from the LSO, and his telling the pilot, 'Nice and easy, fly it down.'"; and (4) Opinion 3, the issue of the malfunctioning centerline sequenced flashers. Regarding the last, a reasonable case can be made for the fact that this tragic accident may never have occurred had these flashers been operating. Centerline sequenced flashers are an important safety device for night operations on flight decks, and concern must be expressed that in this instance they were inoperative due "to long standing maintenance problems." (Finding of Fact 10). The obvious importance of centerline sequenced flashers to flight safety during night operations is reinforced by Recommendations 1 and 2 of the basic investigation. From the foregoing, it can easily be concluded that this accident was caused by a combination of factors, human and mechanical, most of which can be more easily identified as probable causes than a medical opinion based on clinical evaluation.

c. Paragraph 10.b. of COMNAVAIRLANT's SECOND ENDORSEMENT is viewed with some surprise. In non-concurring with Opinion 52, which considered doubtful the fact that the stresses of a recent divorce and remarriage were a factor in the accident, COMNAVAIRLANT states that these would rate very high as possible stress factors. Since COMNAVAIRLANT provides no further information in support of his speculative non-concurrence, it would appear prudent to accept the contrary views of First Lieutenant WHITE's fellow officers who observed his performance on a daily basis. Moreover, logic alone would indicate that after a successful remarriage the possible elements of stress associated with a prior unsuccessful marriage were removed.

████████████████████

CMC:rfb
13 DEC 1981

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Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring onboard the USS NIMITZ (CVN-68) on 26 and 27 May 1981 involving EA-6B aircraft, BUNO 159910, from Marine Tactical Electronic Warfare Squadron Two

3. In summary, the unfortunate circumstances surrounding this tragic accident are many and varied. Therefore, it is highly doubtful that any one factor can be singled out as the primary cause. In combination, however, the end result was the tragic loss of human life. To this end, we must do everything within our capabilities to ensure that such accidents do not occur again.

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COMCARGRU FOUR
CO, USS NIMITZ (CVN-68)
CAPT USN

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CO, USS NIMITZ (CVN-68)
CO, NAVSAFECEN NORVA
CAPT *B4* USN



DEPARTMENT OF THE NAVY
HEADQUARTERS NAVAL MATERIAL COMMAND
WASHINGTON, D.C. 20360

IN REPLY REFER TO
Ser 00/0894
28 Sep 1981

FOURTH ENDORSEMENT on CAPT *Bl* , USN ltr of 30
June 1981

From: Chief of Naval Material
To: Judge Advocate General
Via: (1) Chief of Naval Operations
(2) Commandant of the Marine Corps

Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring onboard USS NIMITZ (CVN 68) on 26 and 27 May 1981 involving EA-6B aircraft, BUNO 159910, from Marine Tactical Electronic Warfare Squadron TWO

1. Forwarded.

2. Although not in the chain of command for this investigation, the Chief of Naval Material takes action upon this investigation as a matter of direct official interest, pursuant to paragraphs 0210 and 0211 of reference (a).

3. By copy of this endorsement the following actions are to be taken and monthly progress reports submitted to the Chief of Naval Material:

a. COMNAVSEASYSKOM is directed to:

(1) Take recommendations #5, 6, 7, 8, 9, 15, 16, 17, 18 (joint effort with NAVAIR), 23, 24, and 25 for appropriate action.

(2) Review and take action as appropriate on paragraphs 6 and 7 of the first endorsement and paragraphs 5 and 6 of the second endorsement.

(3) Issue detailed training doctrine on the use of new inline foam eductors.

b. COMNAVAIRSYSKOM is directed to:

(1) Take recommendations #2, 18 (jointly with NAVSEA), 19, 26, 31, and 32 for appropriate action.

(2) Review and take action as appropriate on paragraphs 7, 13a, and 13e of the second endorsement.

(3) Additionally to:

(a) Include guidance on the "nursing" of flight deck P-16 and MB-5 vehicles in the next issue of the NATOPS Firefighting Manual, NAVAIR-80R-14.

[REDACTED]

(b) Include details on the quantities and locations of combustible metals on common Navy aircraft and recommended fire fighting procedures for such metals in the next NATOPS revision.

4. Paragraph 13c of the second endorsement indicated that 90 flushdeck nozzles which did not have clean-out fittings would receive them by an estimated date of 29 July 1981. It has been collaterally ascertained that all accessible nozzles have been accomplished (approximately 80). The remainder are scheduled to be accomplished.

5. Paragraph 13d of the second endorsement indicated that NAVSEA would advise all concerned of the results of an AFFF allowance and storage study by 31 July 1981. It has been collaterally ascertained that this study has not been completed. Commander, Naval Sea Systems Command is requested to include the status of this study with monthly progress reports made pursuant to paragraph 3a of this endorsement.

6. Subject to the foregoing, the proceedings, findings of fact, opinions and recommendations of the investigating officer, as approved and acted upon by prior endorsers, are concurred with.

Copy to:
CINCLANTFLT
COMNAVAIRLANT
NAVY JAG (Advance)
COMCARGRU FOUR
CO USS NIMITZ (CVN-68)
CO NAVSAFECEN NORVA
CAPT , USN
COMNAVSEASYSYSCOM (w/copy basic report and encls 1-233 and ends)
COMNAVAIRSYSYSCOM (w/copy basic report and encls 1-233 and ends)

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DEPARTMENT OF THE NAVY
 UNITED STATES ATLANTIC FLEET
 HEADQUARTERS OF THE COMMANDER IN CHIEF
 NORFOLK, VIRGINIA 23511

5830/FF1-2/ALL
 Ser 5802
 21 AUG 1981

THIRD ENDORSEMENT on CAPT

USN ltr of 30 June 1981

From: Commander in Chief U. S. Atlantic Fleet
 To: Judge Advocate General
 Via: (1) Chief of Naval Material
 (2) Chief of Naval Operations
 (3) Commandant of the Marine Corps

Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring onboard USS NIMITZ (CVN 68) on 26 and 27 May 1981 involving EA-6B aircraft, BUONO 159910, from Marine Tactical Electronic Warfare Squadron TWO

1. Forwarded.
2. The convening authority inadvertently omitted the classification markings from the basic investigation report which should have been designated "CONFIDENTIAL-Restricted Data--Unclassified upon removal of enclosures (4), (62), (83), and (107)."
- 3.
4. Subject to the foregoing, the proceedings, findings of fact, opinions, and recommendations of the investigating officer, as approved and acted upon by the prior endorsers, are approved.

Copy to:
 COMNAVAIRLANT
 NAVY JAG WASH DC
 COMCARGRU FOUR
 CO USS NIMITZ (CVN 68)
 CO NAVSAFECEN NORVA
 CAPT , USN

708151

ALL BY

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DEPARTMENT OF THE NAVY
COMMANDER NAVAL AIR FORCE
UNITED STATES ATLANTIC FLEET
NORFOLK, VIRGINIA 23511

Ser 012/

0640

27 JUL 1981

SECOND ENDORSEMENT on Captain *B6*, USN, ltr of 30 June 1981

From: Commander Naval Air Force, U. S. Atlantic Fleet
To: Judge Advocate General
Via: (1) Commander in Chief, U. S. Atlantic Fleet
(2) Chief of Naval Material
(3) Chief of Naval Operations
(4) Commandant of the Marine Corps

Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring onboard USS NIMITZ (CVN 68) on 26 and 27 May 1981 involving EA-6B aircraft, BUNO 159910, from Marine Tactical Electronic Warfare Squadron TWO

Encl: (234) Commanding Officer, USS NIMITZ ltr 114 5830 Ser 1623 of 17 July 1981
(235) Pilot Landing Aid Television (PLAT) tape for subject incident (copy)

1. Readdressed and forwarded concurring with the proceedings, findings of fact, opinions and recommendations of the basic report as amended by the first endorsement, with exceptions as noted in the following comments and recommendations.
2. Commanding Officer, USS NIMITZ (CVN 68) letter of 17 July 1981 provided comments as requested by the first endorsement and are noted and added as enclosure (234) to the basic investigation.
3. COMNAVAIRLANT strongly concurs with paragraph 3 of the first endorsement regarding conducting realistic, integrated, complex, scenario-style flight deck drills, particularly on non-CVN-68 class CV's which do not have hard-piped AFFF transfer systems. Currently all of the items addressed therein are covered in the various flight/hangar deck, mass casualty and general quarters exercise evolutions except for the "nursing" of mobile equipment and the operation and casualty control of the AFFF systems, including transfer and replenishment of AFFF. Current systems training in the AFFF system is primarily PMS related. COMNAVAIRLANT will develop exercises which will incorporate training in those areas recognized as deficient. Non-standard fire fighting installations will require tailoring this package to individual CV's. Hence, a significant amount of ship checking and research will be required.
4. COMNAVAIRLANT will insure that all CV emergency and battle bills include manning all AFFF stations during hangar/flight deck fires and during general quarters. This item will also be recommended for addition to the COMTRALANT Training and Readiness Evaluation checklists for CV Damage Control. COMNAVAIRLANT will coordinate with COMNAVAIRPAC and COMNAVAIRSYSCOM to develop standardized procedures for associated training and exercises for all carriers.

25

5. The two-speed AFFF and single-speed injection pumps are virtually identical. It is recommended that these pumps be stenciled/labeled to facilitate visual identification. This will be promulgated to CVLANT and COMNAVAIRPAC.

6. The replenishment of the second deck AFFF stowage tanks is presently accomplished by placing each 55 gallon drum in close proximity to the 2 1/2 inch diameter hangar deck fill pipe, and funnel pouring, hand-pumping or employing an air-operated piston pump to transfer the contents. Either method is acceptable but slow, often hampered by aircraft spots, and in an emergency the air hoses/pumps might not be readily located. It is recommended that NAVSEA authorize a storage rack to be installed on a hangar bay bulkhead. The storage rack would hold an appropriate number of 55 gallon drums of AFFF with a manifold consisting of piping to each drum through the manifold to a dedicated deck filling connection. It is further recommended that NAVSEA investigate the feasibility of a centralized AFFF permanent bulk stowage tank in order to increase overall AFFF allowance for CVs.

7. The need for a reliable, logistically supported and improved Flight Deck Communications System to replace the AN/SRC-22 and AN/PRC 56 combination has long been recognized. COMNAVAIRLANT has been at the forefront in addressing the requirement for a multi-channel system with a switching capability which can also be integrated with the existing DC system. A flight deck system with the desired capabilities (Motorola) is presently being installed in NIMITZ for test and evaluation and as an augment to the present system. IOC for the SRC-47 (replacement for SRC-22) is not scheduled until FY 1986.

8. The DC radio system referred to in opinion 46 was procured for all Atlantic Fleet CVs as a title "D" (ship's force installation). COMNAVAIRLANT will insure that required emphasis is placed on timely completion of this ship alteration within CVLANT.

9. The following comments are submitted regarding the LSO:

a. The LSO calls to 610, (except for initial response to the pilot's ball call and the "power" calls over the wires), are non-standard, i.e., not listed as common radio phraseology in LSO NATOPS. However, the calls used were proper for the situation and should have been cognitive to First Lieutenant White.

b. Line-up deviations, particularly "close-in" to the carrier, are the hardest deviation for an LSO to see, particularly without a reference point behind the aircraft, i.e., horizon, plane guard destroyer, etc. This, combined with a deviation above the glideslope, produces even more angular displacement thereby further masking line-up.

c. The location of the PLAT monitors on Atlantic Fleet CV LSO platforms is not conducive to either the controlling or the back-up LSO's monitoring of the PLAT for line-up. Having a third LSO monitor is acceptable, but his "calls" to the controlling LSOs could be distracting. The LSO Heads Up Display (HUD), currently under development, will put a PLAT monitor into the direct field of view of both LSO's waving, and thus make monitoring line-up easier.

d. LSO qualifications are a subjective matter. Levels of LSO qualifications are recommended by the senior LSO to AIRLANT based upon his perception of individual skill and ability. Both controlling LSOs were qualified to do what they were doing. COMNAVAIRLANT concludes that there was no culpability on the part of the LSOs. It was a difficult night to be waving aircraft and the aircraft's line-up deviations were not severe enough to be easily perceivable until a point at which the LSO is almost of no help at all to the pilot with line-up.

10. The following comments are made regarding the medical aspects of the subject investigation:

a. Findings of Fact 91 and 92 discussed the presence of Boron fibers and efforts to protect salvage crews from harmful effects of such fibers through the use of surgical masks. Such masks are totally ineffective in protecting against inhalation of Boron fibers or the oxide resulting from fire damaged Boron. Protection from Boron can only be obtained by use of a toxic dust air purifier respirator.

c. It is noted that First Lieutenant White was in direct violation of General NATOPS which prohibits the use of over-the-counter drugs or prescription drugs unless approved by a flight surgeon. (Paragraphs 722e(1)(a) and 722e(1)(b) refer.)

None of the medicines found in connection with First Lieutenant White's effects contained Bromphreniramine, and his stomach contents indicate ingestion just prior to flight. The factors/stresses listed in Finding of Fact 133 can be considered a classic "chain of small events" which culminate in an accident, particularly in light of the pilot's upper respiratory infection and self-prescribed remedy, in addition to the divorce/marriage previously discussed.

11.

(1)

(2)

(3)

12.

13. Particular note has been made of the following recommendations in the basic investigation:

a. Recommendation 2; COMNAVAIRLANT concurs that the Centerline Sequence Flashing Light (CSFL) System should be installed in all CV's. A complete re-design is required which would enable ship's force to insure operability. Certification of the CSFL would then be required, as with other flight deck systems, in a revision to Visual Landing Aids (VLA) Bulletin No. 8.

b. Recommendation 5; NAVSEA MSG 140427Z Mar 81 made this recommendation and advised that PMS changes will be made. COMNAVAIRLANT MSG 221754Z Jun 81 and 011454Z Jul 81 directed these changes be implemented as soon as possible.

c. Recommendation 10; of the 90 flushdeck nozzles which do not have clean-out fittings, 4 are being accomplished by Norfolk Naval Shipyard and the remainder by ship's force with an estimated completion date of 29 July 1981.

d. Recommendations 15 and 16; COMNAVAIRLANT MSG 081754Z Jun 1981 requested NAVSEA take the problem of AFFF allowance and storage for action. NAVSEA MSG 221719Z Jun 81 advised that they expected to complete their study and will advise all concerned of their results prior to 31 July 1981.

14.

15. Enclosure (235), the COMNAVAIRLANT copy of the accident PLAT tape, is herewith incorporated into the report of investigation and forwarded. This



DEPARTMENT OF THE NAVY

COMMANDER CARRIER GROUP FOUR
FPO NEW YORK 09601

CCG4:40:cd
5800
Ser 804

10 JUL 1981

FIRST ENDORSEMENT on Captain , USN
ltr of 30 June 1981

From: Commander Carrier Group FOUR
To: Judge Advocate General
Via: (1) Commander Naval Air Force, U.S. Atlantic Fleet
(2) Commander Naval Safety Center, Norfolk
(3) Commander in Chief, U.S. Atlantic Fleet
(4) Chief of Naval Operations
(5) Commandant of the Marine Corps

Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring onboard USS NIMITZ (CVN 68) on 26 and 27 May 1981 involving EA-6B aircraft, BUNO 159910, from Marine Tactical Electronic Warfare Squadron TWO

1. Readdressed and forwarded. By copy of this endorsement, Commanding Officer, USS NIMITZ (CVN-68), is directed to review and comment on the report and to forward his comments via the same addressees indicated on this endorsement. These comments are to be appended to the report and forwarded as part of the official record of this investigation. This procedure also permits the Commanding Officer to initiate corrective and follow-up action as appropriate.

2. The following 27 personnel were injured in the line of duty and not as a result of their own misconduct:

AA	USN	SA	, USN
AOC	USN	AN	USN
ABEC	USN	CE2	, USN
AD2	USN	ABAN	, USN
AMS3	, USN	AA	, USN
AD2	USN	AN	, USN
AE2	, USN	AN	, USN
AN	USN	AA	, USN
AA	, USN	1st LT	, USMC
AA	, USN	AR	, USN
AR I	, USN	HTFA	, USN
LCDR	, USN	ABH3	, USN
AO1	USN	AA	, USN
ABH1	, USN		

ALL B6

(30)

3. This Commander agrees that the performance of the NIMITZ crew was commendable.

It is strongly recommended that COMNAVAIRLANT reassess the ability of aircraft carriers to frequently conduct a simultaneous, realistic, integrated, complex, scenario-style exercise involving execution of at least those factors which were involved in the NIMITZ accident:

- a. Imposition and calling away of the casualty.
- b. Simulated (or actual) activation of installed systems, including AFFF transfer and replenishment.
- c. Ship maneuvering (actual).
- d. Fire fighting techniques, including use of mobile and portable equipment, hose-handling and "nursing" of flight deck fire trucks.
- e. Ordnance considerations, including knowledge of ordnance on deck and on configured aircraft involved.
- f. Communications between Bridge, Air Officer, Central Control, Flight Deck, AFFF Stations and Battle Dressing Stations.
- g. Mass casualty procedures, including internal movement, treatment and medevac considerations.
- h. Record-keeping accuracy and reporting procedures.
- i. Aircraft and ordnance disposal procedures.

4. COMNAVAIRLANT arrived onboard NIMITZ early on the morning of 27 May 81. He and this Commander inspected the area of the accident as soon as it was cleared and safed by EOD team members. At that time VADM _____ concurred in a recommendation by this Commander to jettison the three aircraft which were obviously totally destroyed.

ACC B6 /

6. The concept of centralized storage of AFFF concentrate in recommendation 15 could be improved upon by providing separate storage tanks in different areas (forward and aft) of the ship. In addition, the deck fill fittings in the Hangar Bay should be redesigned to accommodate a higher flow rate from portable containers, such as 55 gal drums.

7. As an interim measure while awaiting catwalk lighting modifications in recommendation 17, it is recommended that NAVSEA implement improved, standardized night time identification of catwalk hose reel stations and related components through use of distinctive painting, reflective paint and tape.

8. The responsiveness of the United States Coast Guard was commendable. The first USCG medevac helicopter arrived onboard NIMITZ at 0234 on 27 May 81, approximately 1 1/2 hours after Fleet Satellite conversation between COMCARGRU FOUR/NIMITZ and COMNAVAIRLANT.

9.

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

Copy to:
CO, USS NIMITZ (CVN 68)
COMNAVSAFECNTR, Norfolk VA
JUDGE ADVOCATE GENERAL
COMCARGRU EIGHT

ALL B6
(32)

Investigation to inquire into the facts and
circumstances concerning an accident and subsequent
events occurring onboard USS NIMITZ (CVN 68) on 26 and
27 May 1981 involving EA-6B aircraft, BUNO 159910,
from Marine Tactical Electronic Warfare Squadron TWO

VOLUME ONE

33

30 June 1981

B-6

From: Captain , USN, 1310
 To: Commander Carrier Group FOUR

Subj: Investigation to inquire into the facts and circumstances concerning an accident and subsequent events occurring on board USS NIMITZ (CVN-68) on 26 and 27 May 1981, involving EA-6B aircraft BUNO 159910 from Marine Tactical Electronics Warfare Squadron TWO.

Ref: (a) JAG Manual

- Encl: (1) COMCARGRUFOUR ltr 114, 5830, Ser 256, dtd 3 June 1981
 (2) COMCARGRUFOUR ltr 114, 5830, Ser 251, dtd 27 May 1981
 (3) Certified true copy of USS NIMITZ (CVN 68) Deck Log covering the period of 2015Q 26 May 1981 to 1654Q 27 May 1981
 (4) Certified true copy of USS NIMITZ (CVN 68) Damage Control Log covering the period of 2336Q 26 May 1981 to 2152Q 27 May 1981
 (5) Weather observations for the period of 26 May 1981 and 27 May 1981, prepared by USS NIMITZ' Meteorological Office
 (6) Signed Statement of CDR I , USN, Meteorological Officer, USS NIMITZ (CVN 68), with Privacy Act Warning
 (7) Signed Statement of LT , USN, VF-41, with Privacy Act Warning
 (8) Signed Statement of LT , USN, VA-35, with Privacy Act Warning
 (9) Signed Statement of LT , USN, VA-86, with Privacy Act Warning
 (10) Signed Transcript of joint interview of LT , USN, and LT , USN, VF-41, with Privacy Act Warnings
 (11) Signed Statement of LCDR , VA-86, with Privacy Act Warning
 (12) Signed Statement of CDR , USN, Commanding Officer, VA-82, with Privacy Act Warning
 (13) Flight Readiness Evaluation Data Sheet
 (14) Copy of Pilot Landing Aid Television (PLAT) Tape
 (15) Signed Statement of CDR , USN, Assistant Air Officer, USS NIMITZ (CVN 68), with Privacy Act Warning
 (16) Signed Statement of CAPT , USN, Commanding Officer, USS NIMITZ (CVN 68), with Privacy Act Warning
 (17) Signed Statement of MAJOR USMC, Officer-In-Charge, VMAQ-2, Detachment Y, with Privacy Act Warning
 (18) Signed Statement of CAPT USMC, VMAQ-2, Detachment Y, with Privacy Act Warning
 (19) Landing trend Data and Analysis, prepared by LCDR , USN, Landing Signals Officer, Carrier Air wing EIGHT
 (20) Copy of extracts from 1/LT WHITE's Aviator's Log Book for May 1981
 (21) Copy of 1/LT WHITE's Instrument NATOPS
 (22) Signed Statement of CDR , USN, Commander Carrier Air Wing EIGHT, with Privacy Act Warning
 (23) Signed Statement of GYSGT , USMC, VMAQ-2, Detachment Y, with Privacy Act Warning

- (24) Signed Statement of LCPL : , USMC, VMAQ-2, Detachment Y, with Privacy Act Warning
- (25) CAPT ARMSTRONG's Instrument NATOPS
- (26) Copy of 1/LT CRAGUN's Instrument NATOPS
- (27) Signed Statement of CDR USN, AIMD OFFICER, USS NIMITZ (CVN 68), with Privacy Act Warning
- (28) Maintenance Data Form
- (29) Transcript of CATTIC and CIC Tapes
- (30) Signed Statement of LTJG , USN, VAW-124, with Privacy Act Warning
- (31) Signed Statement of ACC , USN, OC Division, Operations Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (32) Copy of Personal Survival Equipment Records for CAPT ARMSTRONG, 1/LT WHITE, 1/LT CRAGUN
- (33) Copies of Physical Examinations (NAVMED 6410/2) for 1/LT WHITE, CAPT ARMSTRONG, and 1/LT CRAGUN
- (34) Copy of 1/LT CRAGUN's Water Survival, Physiology
- (35) Copy of 1/LT WHITE's Special Duty Physical Abstract
- (36) Copy of CAPT ARMSTRONG's Water Survival, Physiology
- (37) Signed Statement of LTJG : USN, V-2 Division, Air Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (38) Signed Statement of EMC USN, E-2 Division, Engineering Department, USS NIMITZ (CVN 68), with attached Status Sheets and Privacy Act Warning
- (39) Signed Statement of LCDR , USN, Landing Signals Officer, Carrier Air Wing EIGHT, with Privacy Act Warning
- (40) Signed Statement of LT , USN, VA-86, Controlling Landing Signals Officer, with Privacy Act Warning
- (41) Signed Statement of LTJG , USN, VF-84, Landing Signals Officer, with Privacy Act Warning
- (42) Signed Statement of LT : , USN, VAW-124, Landing Signals Officer, with Privacy Act Warning
- (43) Signed Statement of IC2 , USN, OE Division, Operations Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (44) Signed Statement of CAPT USMC, VMAQ-2, Detachment Y, with Privacy Act Warning
- (45) Copy of USS NIMITZ/Carrier Air Wing EIGHT Air Plan for 26 May 1981
- (46) VMAQ-2, Detachment Y, Flight Schedule for 26 May 1981
- (47) Signed Statement of LT , USN, CATTIC Officer, USS NIMITZ (CVN 68), with Privacy Act Warning
- (48) Statement of CDR , USN, Prospective Air Operations Officer, USS NIMITZ (CVN 68), with Privacy Act Warning
- (49) Signed Statement of CDR USN, Air Operations Officer, USS NIMITZ (CVN 68), with Privacy Act Warning
- (50) Signed Statement of LT , USN, VF-41, with Privacy Act Warning
- (51) Signed Statement of ENS USN, AEMO, OE Division, Operations Department, with Privacy Act Warning
- (52) Signed Statement of LCDR USN, Carrier Wing EIGHT, with Privacy Act Warning
- (53) Signed Statement of LT , USN, VF-84, with Privacy Act Warning
- (54) Landing Signals Officer Qualification Letters for LCDR : , USN, Carrier Air Wing EIGHT, and LT : USN, VA-86
- (55) Copy of Master Flight Log
- (56) Copy of Carrier Air Wing EIGHT, TAC Note I-3 (Enclosure 4)

- ~~CONFIDENTIAL~~
- (57) Book containing Photographs labeled A through BZ
 - (58) Explanation of methodology of PLAT Tape interpretation
 - (59) Signed Statement of ABE2 , USN, V-2
Division, Air Department, USS NIMITZ (CVN 68), with
Privacy Act Warning
 - (60) Signed Statement of LCDR , USN, V-2
Division, Air Department, USS NIMITZ (CVN 68), with
Privacy Act Warning
 - (61) Signed Statement of CAPT , USMC, VMAQ-2,
Detachment Y, with Privacy Act Warning
 - (62) Summary of Costs and Damages
 - (63) Photographic Depiction of Path of 610 and resultant
aircraft damage
 - (64) Signed Statement of CDR , USN, Air
Officer, USS NIMITZ (CVN 68), with Privacy Act Warning
 - (65) Signed Statement of CWO3 : USN, Air
Bos'n, USS NIMITZ (CVN 68), with Privacy Act Warning
 - (66) Signed Statement of ABH3 , USN, V-1
Division, Air Department, USS NIMITZ (CVN 68), with
Privacy Act Warning
 - (67) Signed Statement of ABH2 , USN, V-1
Division, Air Department, USS NIMITZ (CVN 68), with
Privacy Act Warning
 - (68) Summarized Statement of AA , V-1
Division, Air Department, USS NIMITZ (CVN 68), with
copies of pertinent Health Record entries
 - (69) Extracts from the QED Manual on training for the AFFF
System
 - (70) Description of AFFF System
 - (71) Signed Statement of LCDR (, USN, V-1
Division (Flight Deck) Officer, USS NIMITZ (CVN 68),
with Privacy Act Warning
 - (72) Two signed Statements of LT , USN, Assistant
Damage Control Assistant, Engineering Department, USS
NIMITZ (CVN 68), with Privacy Act
 - (73) Signed Statement of LCDR ., USN,
Damage Control Assistant, USS NIMITZ (CVN 68), with
Privacy Act Warning
 - (74) Signed Statement of HT2 , USN, R Division,
Engineering Department, USS NIMITZ (CVN 68), with Pri-
vacy Act Warning
 - (75) Signed Statement of CWO2 , USN,
Officer-In-Charge, Explosive Ordnance Disposal, Unit
Two, with Privacy Act Warning
 - (76) Signed Statement of CWO3 (, USN, G-1
Division, Air Gunner, Weapons Department, USS NIMITZ
(CVN 68), with Privacy Act Warning
 - (77) Signed Statement of AO3 , USN, G-1 Division,
Weapons Department, with Privacy Act Warning
 - (78) Signed Statement of LTJG , USN, V-4 (Aviation
Fuels Officer), Air Department, USS NIMITZ (CVN 68), with
Privacy Act Warning
 - (79) Signed Statement of ABHC , USN, V-1
Division, Air Department, USS NIMITZ (CVN 68), with
Privacy Act Warning
 - (80) Signed Statement of HT2 , USN, USS
NIMITZ (CVN 68), with Privacy Act Warning
 - (81) Two signed Statements of CDR , USN, En-
gineer Officer, USS NIMITZ (CVN 68), with Privacy
Act
 - (82) Signed statement of CDR , USN, Main
Propulsion Assistant, Engineering Department, USS NIMITZ
(CVN 68), with Privacy Act Warning
 - (83) Certified true copy of USS NIMITZ (CVN 68) Engineering
Officer Of the Watch Log for 26 May 1981
 - (84) Signed Statement of ABHC , USN, V-1 Div-
ision, Air Department, USS NIMITZ (CVN 68), with Privacy
Act Warning

- (85) Signed Statement of ABH1 , USN, V-1 Division, Air Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (86) Signed Statement of HTCS , USN, R Division, Engineering Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (87) Signed Statement of LT , USN, Operations Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (88) Signed Statement of ENS , USN, Reactor Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (89) Signed Statement of HT2 , USN, R Division, Engineering Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (90) Signed Statement of Airman , USN, V-1 Division, Air Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (91) Missile Inventory Report
- (92) Two signed Statements of LT , USN, IM-4 (Ground Support Equipment) Division, AIMD Department, USS NIMITZ (CVN 68), with Privacy Act Warnings and Fire-Fighting Equipment PMS Record
- (93) Copy of NIMITZINST 5400.7D
- (94) Extracts from Commander Carrier Group FOUR Log covering the period of 2353Q 26 May 1981 to 0219Q 27 May 1981
- (95) Signed Statement of AOC , USN, VA-35, with Privacy Act Warning
- (96) Signed Statement of AOC , USN, G-1 Division, Weapons Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (97) Signed Statement of EM2 , USN, E-2 Division, Engineering Department, USS NIMITZ (CVN 68) with wiring diagram and Privacy Act Warning
- (98) Signed Statement of EM2 , USN, E-2 Division, Engineering Department, USS NIMITZ (CVN 68), with wiring diagram and Privacy Act Warning
- (99) Signed Statement of HTC , USN, R Division, Engineering Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (100) Two signed Statements of HT2 , USN, R Division, Engineering Department, USS NIMITZ (CVN 68), with Privacy Act
- (101) SHIPALT 6-81
- (102) Signed Statement of LT , USN, OP Division Officer, Operations Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (103) LT , USN, Deck Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (104) Copy of extracts from NIMITZ Ship's Information Volume
- (105) Diagram of NIMITZ' Firemain System
- (106) Copy of Extracts from Navy Aircraft, Firefighting and Rescue Manual NAVAIR 00-80R-14
- (107) USS NIMITZ 251444Z MAR 81
- (108) Air Department memorandum dated 16 May 1981
- (109) Two signed Statements of HT1 , USN, R Division, Engineering Department, USS NIMITZ (CVN 68), with Privacy Act
- (110) Aircraft Firefighting report AFFF System dated February 1981
- (111) Copy of PMS Records for AFFF system
- (112) Messages concerning PMS for USS NIMITZ' AFFF system:
 A. NAVSEASYSKOM 140427Z MAR 81
 B. COMCARGRUEIGHT 181204Z MAR 81
 C. NIMITZ 082232Z MAY 81
 D. NIMITZ 190543Z MAY 81
- (113) USS NIMITZ' Bell Book for the period 0000Q 26 May 1981 to 2400Q 27 May 1981
- (114) Signed Statement of CDR , USN, Navigator, USS NIMITZ (CVN 68), with Privacy Act Warning

- (115) Signed Statement of LT _____, USN,
OI Division, Operations Department, USS NIMITZ
(CVN 68), with Privacy Act Warning
- (116) Summary of relative wind across USS NIMITZ from
2347Q 26 May 1981 to 0020Q 27 May 1981
- (117) Signed Statement of LT _____, USN, HS-9,
with Privacy Act Warning
- (118) Signed Statement of LCDR _____, USN, HS-9,
with Privacy Act Warning
- (119) Signed Statement of LCDR _____, USN,
HS-9, with Privacy act Warning
- (120) Signed Statement of LT _____, USN, HS-9,
with Privacy Act Warning
- (121) Signed Statement of AS2 _____, USN, HS-9,
with Privacy Act Warning
- (122) Signed Statement of OS1 _____, USN, OC
Division, Operations Department, with Privacy Act
Warning
- (123) Signed Statement of SA _____, USN, 6th
Division, Deck Department, USS NIMITZ (CVN 68), with
Privacy Act Warning
- (124) Signed Statement of CAPT _____ USMC, VMAQ-2, De-
tachment Y, with Privacy Act Warning
- (125) Signed Statement of 1/LT _____, USMC, VMAQ-2,
Detachment Y, with Privacy Act Warning
- (126) Signed Statement of HM3 _____, USN, VF-84,
Medical Department, USS NIMITZ (CVN 68), with Privacy
Act Warning
- (127) Armed Forces Institute of Pathology letter 1792869
SEQ-O MJD/ba/ CPL-A dtd 22 June 1981, signed by
COL _____, USAF, MC
- (128) Copy of extract from GOODMAN and GILLMAN (Pages 625 - 630)
- (129) Copy of extract from Toxicology Handbook of Commercial
Products, Gleason, Gosselin, Hodge, Smith, Third Edition,
(Page 152)
- (130) Extract from OPNAVINST 3710.7K
- (131) Copy of extract from 1/LT Steve E. WHITE, USMC, VMAQ-2,
Detachment Y, Health Records
- (132) Signed Statement of 1/LT _____, VMAQ-2, De-
tachment Y, with Privacy Act Warning
- (133) Signed Statement of CAPT _____ USMC, VMAQ-2,
Detachment Y, with Privacy Act Warning
- (134) Special Duty abstract for LT _____, USN,
Landing Signals Officer
- (135) Medical Examination (Standard Form 88) for LCDR
_____, USN, Landing Signals Officer
- (136) Signed Statement of CAPT _____, MC, USNR,
with Privacy Act Warning
- (137) Signed Statement of LTJG _____, USN, S-8
Division Officer, Supply Department, OOD, USS NIMITZ
(CVN 68), with Privacy Act Warning
- (138) Signed Statement of HM3 _____, USN, Medical De-
partment, USS NIMITZ (CVN 68), with Privacy Act Warning
- (139) Signed Statement of LT _____, MC, USN, Flight
Surgeon, Carrier Air Wing EIGHT, with Privacy Act Warning
- (140) Signed Statement of LCDR _____, MSC, USN, Medical
Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (141) Signed Statement of HM2 _____, USN, Medical De-
partment, USS NIMITZ (CVN 68), with Privacy Act Warning
- (142) Copy of extracts from USS NIMITZ' Medical Department
Log
- (143) Signed Statement of HMC _____, USN, Medical De-
partment, USS NIMITZ (CVN 68), with Privacy Act Warning
- (144) Signed Statement of CWO3 _____, USN, Medical De-
partment, USS NIMITZ (CVN 68), with Privacy Act Warning
- (145) Signed Statement of LCDR _____, DC, USNR,
Dental Department, USS NIMITZ (CVN 68), with Privacy
Act Warning

- (146) Signed statement of HM2 (, USN, Medical Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (147) Signed Statement of HM2 , USN, Medical Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (148) Signed Statement of HM2 I , USN, Medical Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (149) Signed Statement of HM3 , USN, Medical Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (150) NIMITZINST 6000.1A
- (151) Signed Statement of LT , MC, USNR, Flight Surgeon, Carrier Air Wing EIGHT, with Privacy Act Warning
- (152) Signed Statement of HM1 , USN, Medical Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (153) Signed Statement of HM3 , USN, Medical Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (154) Signed Statement of ENS USN, V-2 Division, Air Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (155) Excerpt from AIROPS Master Log ✓
- (156) Signed Statement of CDR , DC, USN, Dental Officer, USS NIMITZ (CVN 68), with Privacy Act Warning
- (157) Signed Statement of DT2 USN, Dental Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (158) CAPT E. M. ARMSTRONG, JR., USMC, VMAQ-2, Detachment Y, Death Certificate, Autopsy Finding, and Toxicology Report
- (159) Signed Statement of DMSN , USN, V-1 Division, Air Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (160) Naval Regional Medical Center, Portsmouth, VA, letter Code 206:bfm dtd 29 May 1981, signed by LCDR , DC, USN and CDR G. T. PEAK, DC, USN
- (161) AA Thomas E. BURNHART, USN, Death Certificate, Autopsy Finding, and Toxicology Report
- (162) AN Albert COLON, USN, Death Certificate, Autopsy Finding, and Toxicology Report
- (163) Signed Statement of ABFC , USN, V-4 Division, Air Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (164) 1/LT Laurence D. CRAGUN, USMC, VMAQ-2, Detachment Y, Death Certificate, Autopsy Finding, and Toxicology Report
- (165) FN Dennis R. DRISCOLL, USN, Death Certificate, Autopsy Finding, and Toxicology Report
- (166) Signed Statement of ABF3 USN, V-4 Division, Air Department, USS NIMITZ (CVN 68), with Privacy Act Warning
- (167) Signed Statement of LCDR USN, Maintenance Officer, Carrier Air Wing EIGHT, with Privacy Act Warning
- (168) AR Jackie L. GOTHARD, USN, Death Certificate, Autopsy Finding, and Toxicology Report
- (169) AN Arturo HINJOSA, JR., USN, Death Certificate, Autopsy Finding, and Toxicology Report
- (170) AR Peter R. IANETTI, USN, Death Certificate, Autopsy Finding, and Toxicology Report
- (171) ABH3 Robert W. ISER, USN, Death Certificate, Autopsy Finding, and Toxicology Report

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- (172) Summarized Statement of ABH3 , USN, V-1 Division, Air Department, with Privacy Act Warning and Article 0306 Warning and copies of pertinent Health Record entries
- (173) Two signed Statements of LCDR USN, Assistant Flight Deck Officer, V-1 Division, Air Department, USS NIMITZ (CVN 68), with copies of pertinent Health Record entries and Privacy Act and Article 0306 Warnings
- ✓ (174) AN Patrick D. LOUIS, Death Certificate, Autopsy Finding, and Toxicology Report C
- (175) Summarized Statement of ABEC , USN, V-2 Division, Air Department, USS NIMITZ (CVN 68), with copies of pertinent Health Record entries
- (176) Summarized Statement of AA , USN, V-1 Division, Air Department, USS NIMITZ (CVN 68), with copies of pertinent Health Record entries and Privacy Act and Article 0306 Warnings
- (177) Summarized Statement of AA , USN, V-1 Division, Air Department, USS NIMITZ (CVN 68), with copies of pertinent Health Record entries and Privacy Act and Article 0306 Warnings
- (178) Two signed Statement of AOAN , USN, with copies of pertinent Health Record entries and Privacy Act and Article 0306 Warnings
- (179) AO3 Lewis J. MCLAURIN, USN, Death Certificate, Autopsy Finding, and Toxicology Report
- ✓ (180) AA Frank J. SWIDER, JR., USN, Death Certificate, Autopsy, Finding, and Toxicology Report C
- (181) 1/LT Steve E. WHITE, USMC, Death Certificate, Autopsy Finding, and Toxicology Report
- (182) Signed undated statement of COL , USAF, BSC, Chief Division of Toxicology, Armed Forces Institute of Pathology
- (183) AN Ronald E. WILDERMUTH, USN, Death Certificate, Autopsy Finding, and Toxicology Report
- (184) Signed Statement of AMS2 , USN, with Privacy Act and Article 0306 Warnings, and copies of pertinent Health Record entries
- (185) Summarized Statement of AE2 , USN, VF-41, with copies of pertinent Health Record entries
- (186) Signed Statement of CAPT , MC, USNR, Ship's Surgeon, USS NIMITZ (CVN 68), with Privacy Act Warning
- (187) Signed Statement of LT , USN, VS-24, with Privacy Act Warning
- (188) Summarized Statement of AA , USN, V-1 Division, Air Department, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (189) Copy of NAVREGMEDCENJAX 031635Z JUN 81
- (190) Signed Statement of LTJG , USN, VF-41, with Privacy Act Warning
- (191) Signed Statement of CDR , MC, USN, Flight Surgeon, Carrier Air Wing THREE, with Privacy Act Warning
- (192) Summarized Statement of AOC , USN, EODMU TWO, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (193) Copy of NAVREGMEDCENJAX 051547Z JUN 81
- (194) Summarized Statement of AN , USN, VF-41, with copies of pertinent Health Record entries
- (195) Signed Statement of LT , USN, Attack Squadron THIRTY-FIVE, with Privacy Act Warning
- (196) CE2 , USN, EODMU TWO copies of pertinent Health Record entries

- (197) Summarized statement of AO2
USN, VF-41, with Privacy Act and Article
0306 Warnings and copies of pertinent Health
Record entries
- (198) Copy of NAVREGMEDCENJAX 071900Z JUN 81
- (199) Signed Statement of ABAN
USN, V-2 Division, Air Department, USS NIMITZ (CVN 68),
with Privacy Act and Article 0306 Warnings and
copies of pertinent Health Record entries
- (200) Summarized Statement of AMS3 , USN, VA-86,
with copies of pertinent Health Record entries
- (201) Summarized Statement of AD2 , USN, VAW-124,
with Privacy Act and Article 0306 Warnings and
copies of pertinent Health Record entries
- (202) Summarized Statement of AN , USN, VF-41,
with Privacy Act and Article 0306 Warnings and
copies of pertinent Health Record entries
- (203) Copy of CDR BMAC, FT SAM, Houston, San Antonio, TX,
041515Z JUN 81
- (204) Summarized Statement of AN , USN, V4
Division, Air Department, USS NIMITZ (CVN 68) with
copies of pertinent Hospital Record entries
- (205) Summarized Statement of AA , USN, VA-86,
with copies of pertinent Health Record entries
- (206) Summarized Statement of AA 1 , USN, V-2
Division, Air Department, USS NIMITZ (CVN 68), with
Privacy Act Warning and Article 0306 Warning copies of
pertinent Health Record entries
- (207) Summarized Statement of AA , USN,
VA 35, with copies of pertinent Health Record entries
- (208) Message containing 1/LT , USN, VMAQ-2, Detachment Y,
with Privacy Act and Article 0306 Warnings and
copies of pertinent Health Record entries
- (209) Summarized Statement of AA , USN, V-4
Division, Air Department, USS NIMITZ (CVN 68), with
copies of pertinent Health Record entries
- (210) Summary of Statement of AR , USN, V-4
Division, Air Department, USS NIMITZ (CVN 68), with
copies of pertinent Health Record entries
- (211) Summary of Statement of AR , USN, V-4 Division,
Air Department, USS NIMITZ (CVN 68), with copies of
pertinent Health Record entries
- (212) Summarized Statement of HTFA , USN, R Division,
Engineering Department, USS NIMITZ (CVN 68), with
copies of pertinent Health Record entries
- (213) Summarized Statement of AO1 , USN, VS-24,
with Privacy Act and Article 0306 Warnings and
copies of pertinent Health Record entries
- (214) Summarized Statement of ABH1
USN, V-1 Division, Air Department, USS NIMITZ (CVN 68),
with Privacy Act and Article 0306 Warnings and
copies of pertinent Health Record entries
- (215) Signed Statement of AO2 , USN, with Privacy
Act and Article 0306 Warnings and copies of
pertinent Health Record entries
- (216) Signed Statement of LCDR , USN,
Carrier Group FOUR, with Privacy Act and Article
0306 Warnings and copies of pertinent Health
Record entries
- (217) Signed Statement of AMS2 J , USN,
F-84, with Privacy Act and
and copies of pertinent Hea
- (218) Signed Statement of ABE3
V-2 Division, Air Departmen
with Privacy Act and Artic
copies of pertinent Health

- (219) Signed Statement of ADAA I , USN, VA-35, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (220) Signed Statement of AA , USN, VA-35, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (221) Signed Statement of AMHAA , USN, VA-35, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (222) Signed Statement of AN , USN, VA-86, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (223) Signed Statement of AA , USN, VS-24, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (224) Signed Statement of ADAA USN, VA-86, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (225) Signed Statement of ATC , USN, VA-86, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (226) Signed Statement of AFCM , USN, VAW-124, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (227) Signed Statement of AMEC , USN, VF-41, with Privacy Act and Article 0306 Warnings and copies of pertinent Health Record entries
- (228) Signed statement of LTJG , USN, R Division, Engineering Department, USS NIMITZ (CVN 68), with Privacy Act
- (229) Signed statement of HTFA , USN, R Division, Engineering Department, USS NIMITZ (CVN 68), with Privacy Act
- (230) Signed statement of HT3 , USN, R Division, Engineering Department, USS NIMITZ (CVN 68), with Privacy Act
- (231) Digital Voice Protection Radio System description extract from Motorola's Tone Remote Console Owner's Manual
- (232) Signed statement of HTFA , USN, R Division, Engineering Department, USS NIMITZ (CVN 68) with Privacy Act
- (233)

PRELIMINARY STATEMENT

1. In accordance with reference (a), and as directed by enclosure (1), this officer relieved Captain USN, as investigating officer of the subject incident. Captain ; had been appointed interim investigating officer by enclosure (2).

2. The investigating officer was assisted by the following officers who were selected for their expertise in the areas indicated:

<u>NAME</u>	<u>BILLET</u>	<u>EXPERTISE</u>
CDR	ACOS Ship Material Readiness	Surface Operations
CDR	Flight Surgeon, Carrier Air Wing THREE	Medical
LCDR	Safety Officer, ATKRON THIRTY-FIVE	A-6 Flight Operatic
LT	EOD, Group TWO	Ordnance
LTJG	Flight Support Officer NAS Oceana	Flight Deck Firefighting

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LT	Judge Advocate, COMCARGRU FOUR	Legal
ENS	Asst. CIC Officer, COMCARGRU FOUR	Ship Control
ENS	Fire Marshal, USS J. F. KENNEDY	Damage Control

These officers were permitted to conduct interviews and take statements that related to their areas of expertise. In addition, Mr. _____ from the NAVMAT CV Firefighting Improvement Program, assisted in the investigation.

3. Prior to obtaining interviews and statements from witnesses, the witnesses were advised of the matter under investigation and the provisions of the Privacy Act. Injured personnel were apprised of their rights in accordance with Article 0306 of reference (a). Suspects were advised in accordance with Article 31(b), Uniform Code of Military Justice.

4. The various summarized and verbatim statements, which are attached as enclosures, are certified to be a correct and accurate record of interviews with the witnesses. In addition, the differences between a JAG Manual Investigation and an Aircraft Mishap Board of Investigation were fully explained. Where the recorded statements of the witnesses have been summarized, the investigating officer and his assistants have certified them to be accurate. The date on the statements is the date of signing rather than the date the statements were taken. Privacy Act statements and suspects' rights acknowledgements in accordance with Article 31, UCMJ (where deemed necessary) are attached to all statements and summaries of statements. Signed Privacy Act and Article 0306 warnings could not be obtained from some of the injured personnel ashore who were unable to write or who were interviewed by telephone. In all cases the interviewing officers verbally apprised all personnel of their rights.

5. Efforts were made to obtain statements from all personnel with knowledge relevant to the accident. Over 400 people were interviewed. A note was placed in the NIMITZ Plan of the Day soliciting written statements from, "anyone who believes he might have something to contribute to the investigation." Those statements which were taken, but not included as enclosures to this report, are deemed cumulative to the matters contained herein.

6. Due to a large number of the victims being hospitalized in Jacksonville, Florida, Portsmouth, Virginia, and San Antonio, Texas, it was necessary to send the following officers to the locations indicated to obtain statements:

<u>NAME</u>	<u>COMMAND</u>	<u>LOCATION</u>
LT _____	VS-24	Jacksonville, Florida
LTJG _____	VF-41	Portsmouth, Virginia
LT _____	VA-35	Brooke Army Medical Center, San Antonio, Texas

7. The information contained herein relates to internal practices of the Department of the Navy and is an internal communication within the Department of the Navy. Requests for this report, portions thereof, or correspondence related thereto, from a source external to the Department of the Navy, shall be referred to the Judge Advocate General of the Navy (Code 21) for coordination and clearance.

8. A brief summary of events is included to assist the convening and reviewing authorities as to what basically occurred. Although factual, this summary is exclusive of findings of fact, opinions, and recommendations.

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a. At 21240 on 26 May 1981, an EA-6B aircraft, BUNO 159910, MODEX Number 610, launched from USS NIMITZ, which was operating off the coast of northern Florida.

~~b. At 2331, 610 made a bolter pass. 610 stayed under control of the ship's Carrier Air Traffic Control Center (CATCC).~~

d. A fire ensued and efforts to extinguish it commenced immediately. The fire was completely extinguished or nearly extinguished by 0020, 27 May 1981, when a secondary explosion occurred which caused additional deaths and injuries.

e. Search and Rescue, Mass Casualty, and Medical Evacuation operations continued throughout the night.

f. The following morning, at approximately 0700, Explosive Ordnance Disposal Group TWO personnel from Cecil Field arrived on board. They assisted the ship's EOD officer in clearing the wreckage of explosive ordnance.

g. During the afternoon of 27 May 1981, EA-6B aircraft, BUNO 159910, F-14 aircraft, BUNO's 160385 and 161138 were jettisoned over the side.

h. At 12300, 28 May 1981, NIMITZ moored at Naval Station, Norfolk, Virginia.

9. During the accident and the events following, thirteen Navy men died, one was lost at sea, and twenty-seven suffered lost time injuries. Three aircraft were destroyed, and nine were damaged.

11. The performance of the crew of NIMITZ in the aftermath of the accident was highly commendable. The performance of certain individuals was courageous. No attempt has been made in this report to cite those individuals.

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FINDINGS OF FACT

PREACCIDENT

1. At 2350Q 26 May 1981, the time of the accident, USS NIMITZ (CVN-68) was conducting aircraft recovery operations on course one six five degrees true, at a speed of six knots. The ship was located at 30 degrees 29.3 minutes north and 80 degrees, 22 minutes west, 70 nautical miles east of Jacksonville, Florida. The ship's list was one-half degree port, trim one-half degree aft. NIMITZ had been on this recovery course since 2336. Sea Conditions were moderate, with zero swell wave, and a wind - wave condition from one six zero degrees true, period of four seconds, and a wind - wave height of three feet. (Enclosures 3, 4, 5)
2. The weather observation from the ship's meteorological office at 2350 was: partially obscure, 3,500 feet scattered, estimated 10,000 feet broken, 25,000 feet broken, 5 nautical miles visibility restricted by haze. True wind 160 degrees at 11 knots. Relative wind 355 degrees 16 knots. The nearest radar echo was about 21 miles south - southwest of the ship. It was part of a squall line approximately five miles wide extending from the northwest to the southeast. The weather at the primary divert field, Charleston, at 2255 was; estimated 3,000 feet broken, seven nautical miles visibility. (Enclosure 5,6)
3. Airborne observations of the weather during the recovery were: partially obscure 2,000 feet scattered variable, broken 2,500 feet broken variable overcast, 3 nautical miles visibility restricted by haze. There was no visible horizon. It was a very black night regularly interrupted by lightning in the western quadrants. The night was described by the airborne aviators as; "bottom of the mineshaft", "the milk bowl effect of lightning going every thirty seconds in the haze", and "a night where you could get vertigo." (Enclosures 7, 8, 9, 10, 11, 12)
4. The relative wind displayed on the PLAT was 21 knots, the LSO called 28 knots, the Air Officer and the Captain said it was about 25 knots. (Enclosures 14, 15, 16)
5. 1st LT Steve E. White, U. S. Marine Corps, [REDACTED], the Safety Officer of Marine Tactical Electronic Warfare Squadron - TWO Detachment Yankee, was the pilot of aircraft 610. His military aviation experience totalled two years, eight months. During this time he accumulated 1050.9 total flight hours with 735.4 EA-6B flight hours. He had logged 54 total carrier arrested landings of which 40 (27 day/13 night) were in the EA-6B aircraft. In the previous ten days he had logged 6 day and 5 night arrestments. 1st LT White's last flight before the crash was the evening of 24 May, 2.2 hours in duration (.7 night hours). His training requirements were current and complete. 1st LT White had not participated in CVW-8 carrier operations with the exception of carrier qualifications prior to Type Training One (TYT-1), which commenced 18 May 1981. He had not previously been exposed to carrier cyclic operations. (Enclosures 17, 28, 19, 20, 21, 22, 24, 33)
6. 1st LT White's carrier landing performance was considered average for his experience level, "solid and continually improving. No trends were evident that would indicate any problems." (Enclosure 19)
7. Aircraft 610 was additionally crewed by two Electronic Countermeasures Officers (ECMO) of Marine Tactical Electronic

Warfare Squadron - Two Detachment Yankee. The ECMO Number 1 position (right front seat) was manned by Captain Elwood M. Armstrong, Junior, U. S. Marine Corps, the Detachment's Flight Officer. He had four years eight months aviation experience with duty in one prior carrier detachment in 1980. The ECMO Number 3 position (left rear seat) was manned by 1st LT Laurence D. Cragun, U. S. Marine Corps, the Detachment's Assistant Administration Officer, two years aviation experience. The ECMO Number 2 position was not occupied. Both Officer's training records indicate that all ECMO Qualifications and training requirements were current and complete. (Enclosures 13, 17, 23, 18, 24, 25, 26)

8. A review of the aircraft records revealed all required inspections were current with no outstanding maintenance discrepancies which would have caused a mechanical malfunction. Three flights earlier the pilot's ICS system had been intermittent due to a loose seat services block. The discrepancy was corrected and the aircraft had flown twice without incident. The aircraft was properly released for flight. All aircraft survival equipment inspections were current. No internal aircraft problems were reported by the crew of 610 prior to the crash. (Enclosures 14, 27, 28, 29, 30, 31)

9. All three aircrewmembers had current aviation physical examinations, aviation physiology training and water survival training. All personal survival equipment inspections were current on the date of the accident. (Enclosures 32, 33, 34, 35, 36)

10. The ship's optical landing system, set to three and one-half degrees, and flight deck lighting were functioning normally with the following exceptions: centerline sequenced flashers inoperative due to long-standing maintenance problems, 2 of 17 centerline lights out, 4 of 32 runway edge lights out, 11 of 19 safe parking lights out, 1 of 13 vertical drop lights out and 3 of 54 deck edge lights out. (Enclosures 37, 38)

11. The LSO platform equipment, including a PLAT, was functioning normally with the exception of intermittent lighting on the wind speed and wind direction indicators. The ship's Pilot Landing Aid Television (PLAT) equipment was aligned and operating normally. (Enclosures 39, 40, 41, 42, 43, 45)

12. The crew of aircraft 610 briefed in ready room number nine at 1930 on 26 May 1981. The briefed primary divert field was NAS, Cecil. The brief was in accordance with VMAQ-2 and other pertinent directives. (Enclosures 30, 44)

13. Aircraft 610 (Airplan Event 6G1) launched at 2124 on a duly authorized flight from USS NIMITZ for an electronics countermeasures training flight against CVW-8, F-14 aircraft. Controlled by E-2C aircraft 011, 610 provided sector jamming for close control intercepts against simulated aggressor aircraft. The operational portion of the mission was terminated at approximately 2230 with participants judging the training, "a very good period for all." The total duration of the flight was two hours, twenty-six minutes. (Enclosures 13, 30, 45, 46)

14. At approximately 2240, 610 switched to marshal frequency for check in. 610 was assigned 7,000 feet at 22 nautical miles. The primary divert had been changed to Charleston AFB bearing 008 degrees at 138 nautical miles. 1st LT White had no recorded landings at Charleston. Expected approach time was not provided at this time. (Enclosures 9, 30, 31, 47)

15. The scheduled 2300 launch was delayed 20 minutes due to the extended recovery of the previous event. All aircraft in marshal were told "MAX CONSERVE" (conserve fuel). 610 was given

a 2325 expected approach time at approximately 2300.
(Enclosures 9, 31, 47, 48, 49, 50)

16. The AN/SPN 42 (Automatic Carrier Landing System) was operational on the evening of 26 May 1981. (Enclosures 10, 51, 52, 53)

17. 610 descended out of the marshal stack and called "platform" (5,000 feet) at 2325:20. 610 flew a Mode II ACLS approach (needles only) and called the ball, three-quarters of a mile at 2331:58 with 7,000 pounds of fuel remaining. (Enclosures 14, 29)

18. The primary Landing Signal Officer (LSO) on the 2300 recovery was Lieutenant , with a squadron LSO qualification of three months and a team leader designation. The back up LSO was Lieutenant Commander , the Carrier Air Wing Eight LSO, with a staff qualification, 4 years 7 months as a qualified LSO. In addition, there were two LSO's under training, a phone talker and a hook spotter on the platform. (Enclosures 39,40,41,42,52,54)

19. "At time" 2332:24 610 boltered. The LSO assigned the following grade: "overcontrolled a settle at the in-close position, flew through the glide slope (climbing) at the ramp."
(Enclosures 14, 19, 29)

20. Aircraft 610 entered the bolter/wave-off pattern was vectored downwind and then turned in to intercept final bearing. At 2337 610 was told to climb to 2,000 feet and turned back to the downwind at 2342, due to fuel critical priority aircraft (202). At 2344 610 turned to intercept final bearing again.
(Enclosures 14, 29, 31, 47, 55)

21. Aircraft 610 became a fuel critical aircraft (within 1,000 pounds of BINGO) at 2343. Five of the ten aircraft on the 2300 recovery were designated fuel critical. 610 was queried for "fuel state" and responded four times between 2340 and 2348. 610 did not make a "bingo plus one" call. (Enclosures 14, 29, 31, 47, 55)

22. CVW-8 TACNOTE I-3 states, "pilots must still emphatically ensure that CATCC is aware when they arrive at a bingo plus one fuel state." 610 reached bingo plus one fuel state at 5,700 pounds. (Enclosures 14, 29, 56)

23. 610 called the ball at 2332 for the bolter pass with 7,000 pounds of fuel. At 2350, the ball was called with 4500 pounds of fuel. This equates to fuel usage at the rate of 8,333 pounds per hour. (Enclosure 14, 29)

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24. At 2347 610 commenced a Mode II ACLS approach using CV NATOPS procedures at five and a half nautical miles. (Enclosures 14, 29 and 31)

25. At 2348, 610 reached EA-6B Bingo fuel state of 4700 pounds, three nautical miles on final approach. (Enclosures 14, 29, 47)

26. The CATCC supervisor, AOC notified the CATCC Officer, Lieutenant , of 610's bingo fuel state at 2348. Lieutenant notified the acting Air Operations Officer, Commander , and was told "Give him a look at the deck. Keep him coming." (Enclosures 22, 31, 47, 48, 49)

27. "At time" 2349:58 aircraft 610 arrived at three-quarters of a mile, with 4500 pounds of fuel, above the three and a half degree glideslope and faster than optimum approach speed.
(Enclosures 14, 29, 39, 40)

28. The centerline sequenced flashers were not available to assist the pilot of 610 with lineup corrections. (Enclosure 38)

29. The LSO responded to 610's "Prowler ball" call with, "Roger ball, Prowler Twenty-eight knots slightly axial" followed by

"Don't go high". The pilot then established a correction towards the glideslope. (Enclosures 14, 29, 39, 40)

30. "At Time" 2350:17 610's lights first appeared on the PLAT. He was approximately twenty-six feet left of the centerline. (Enclosures 14, 57A, 58)

31. "At Time" 2350:17, the established rate of descent was bringing 610 down to the glideslope, the LSO called "catch it nice and easy". 610 made a right correction toward line-up but, no significant decrease in rate of descent was observed. (Enclosures 14, 29, 39, 40, 57A, 58)

32. The LSO called again "catch it". "At Time" 2350:20, 610 was approximately 13 to 8 feet left of centerline drifting right. (Enclosures 14, 57D, 58)

33. The pilot then applied power which caused 610 to flatten its approach and significantly reduced its rate of descent. "At Time" 2350:22 610 crossed the centerline with a continuing right drift. (Enclosures 14, 39, 40, 57F, 58)

29, 39, 40, 57G, H, 58) (Enclosures 14,

The LSO's reaction to the power reduction and nose drop was to call "power", immediately followed by "power!" Power was applied to aircraft 610. (Enclosures 14, 29, 39, 40, 57I, J, 58)

36. Between 2350:24 and 2350:25, 610 was abeam the LSO platform descending with power coming on. (Enclosures 14, 29, 39, 40, 57 J and K, 58)

(Enclosures 14, 57K, L, 58)

38. His position relative to centerline at the end of "At Time" 2350:26 could not be determined.

(Enclosures 14, 39, 40, 57M, 58, 59, 60)

39. I

40, 57N, O, P, Q, R, S, T, 58, 59, 60, 61) (Enclosures 14, 16, 39,

40.

10, 37, 38, 39, 40, 57,

41.

EA-6B aircraft 610 Bureau Number 159910 was totally

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destroyed in the crash, explosions and fire. (Enclosures 14, 57W,X, 62)

42. Eleven other aircraft were damaged or destroyed as a result of this accident. The estimated total cost of aircraft destroyed/damaged, using Unit Flyaway Cost and Naval Air Rework Facility Estimates, was \$53,454,058. Additional property/equipment destroyed, damaged, lost or consumed as a result of this accident cost approximately \$4,484,926. (Enclosures 57N,P,Q,R,S,T,W,X,Y, Z,BL, 62)

43. The LSO assigned a grade to the approach as follows: "Bolter - high fast start, over-controlled a settle in close, flat at the ramp, drifted right in the wires (underlined)." (Enclosures 19, 39, 40)

44. The LSO did not make a line up correction call during 610's carrier approach. (Enclosures 14, 29, 39, 40, 42)

45. MEASUREMENTS DERIVED FROM PLAT TAPE

"AT TIME"

610's approximate centerline position relative to carrier landing area centerline

(Enclosures 12, 57A,B,C,D,E,F,G,H,I,J,K,L,M,O, 58)

46. The pilot's autopsy findings showed *BL*

This aspect of the accident is covered in the Medical Section of this report. (Enclosures 127, 128)

DAMAGE CONTROL AND FIRE FIGHTING

47. The Assistant Air Officer was in charge in Primary at the time of the accident. (Enclosure 15)

48. When 610 crashed the Assistant Air Officer immediately sounded the flight deck crash alarm and passed the word, "Fire on the Flight Deck," over the SMC. (Enclosures 14, 15)

49. Flight deck personnel immediately responded to the fire. (Enclosure 14)

50. The Air Officer was in his 09 level stateroom, heard the word, "Fire on the Flight Deck," and rushed to Primary. (Enclosures 15, 64)

51. The Commanding Officer called away General Quarters at time 2351:30. (Enclosures 14, 16)

52. All three mobile firefighting units were reported operable on the morning of 26 May. Prior to the accident, the MB-5 crash truck was manned and positioned on aircraft elevator number one, one P-16 fire unit was manned and positioned on the bow near the nose of aircraft 111, and the spare P-16 fire unit was parked next to the inboard side of the island. (Enclosures 65, 90, 92)

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(Enclosures 14, 65, 66, 67)

54. When attempting to move the P-16 fire unit from abreast the island, the unit suffered a drive train malfunction. The unit had been repaired several times previously for the same problem. The P-16 was slowly driven to the scene of the fire, but was unable to maneuver to upwind of the fire. (Enclosures 65, 66, 67)

55. The P-16 fire unit on the bow was pinned beneath F-14 111 at the time of the accident, and was immobilized during the remainder of the fire. (Enclosures 57Y, 92)

56. [

The Air Officer depressed the countermeasures system control valve "OPEN" and the AFFF injection pump "START" buttons for Zones One, Two, Three and Four. (Enclosures 15, 16, 57AC, 64, 69, 70)

57. AFFF Zone One is located on the starboard bow diagonally across the deck from the crash site. Zone Two is located immediately forward of the crash site. Zone Three is immediately to starboard, and Zone Four encompasses the crash area (Enclosures 57AB, AC). Zone Four was covered with debris from the initial crash and subsequent explosions. (Enclosures 57AC, 69, 75)

58. The proper COUNTERMEASURE WASHDOWN/AFFF Zones were activated relative to the fire location and prevailing winds in accordance with U. S. Navy Aircraft Firefighting and Rescue Manual, NAVAIR 00-80R-14. (Enclosures 57AC, 106)

59. The ship's official deck log does not reflect an order being given to man second deck AFFF stations as required by NIMITZINST 5410.7D when a flight deck fire occurs. The unofficial COMCARGRU FOUR staff watch officer log reports a 1MC announcement to, "Energize AFFF stations 1, 2, 4 Time plus three." at 2356. (Enclosures 93, 94)

60. CWO3 (Air Bos'n) arrived at the fire in approximately two minutes and continued to serve as the on-scene leader for the remainder of the fire. (Enclosures 65, 71)

61. At the time of crash and initial fire, the wind was coming over the bow. The ship was maneuvered to blow the fire and smoke toward the port side. Within three minutes the wind was coming from the starboard bow and within six minutes the wind was steady from starboard. Accordingly, Zone Two was upwind of the fire area for the first few minutes with Zone Three being upwind for the duration of the fire. (Enclosures 14, 57AC)

62. Zones One and Four produced AFFF and salt water upon activation from the control panel in Primary.

(Enclosure 69 describes AFFF systems serving Zones 2 and 3.) (Enclosures 16, 57AC, 64, 69, 72)

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(Enclosures 57AC, 69, 97, 98)

65. The X50J sound powered phone communication circuit between Primary and the AFFF stations was not manned by Primary during the course of the fire. When AFFF stations were manned, communications were established with Central Control on the X50J system by station operators. (Enclosures 73, 81, 90)

66. Eight (8) deck edge nozzles located along the port side of the bow were bent or broken by aircraft 610's crash. (Enclosures 57W, 57Z, 99)

67.

(Enclosures 57BY, AC, 69, 73, 74)

68. Many crewmembers had to grope in the dark catwalks in order to find hose reels, fire stations, and AFFF activation buttons. (Enclosures 95, 96)

69. Flight Deck flood lights were turned up by the Air Officer approximately four and one-half minutes after the crash. (Enclosures 14, 64)

70. Due to the smoke, COUNTERMEASURES system/hose spray, aircraft shadows, and remoteness from the island lighting, "it was extremely dark" on the bow. The on-scene leader "couldn't see hardly anything." even though "the Boss had the lights up full bright." Visual identifications/inspections on the forward flight deck were hampered by the "inadequacy of the lighting." (Enclosure 65)

71. After General Quarters was sounded, and Material Condition Zebra was set, the available fire main capacity in the port loop was reduced to 100 to 110 pounds per square inch (psi). After the COUNTERMEASURES WASHDOWN system was activated, the Engineer Officer directed the setting of modified YOKE on the fire-main system in order to provide additional pumping capacity to the port fire main. Pumps 5E, 6E, 14E and 15E were brought on the line and fire main pressure maintained at one hundred sixty to one hundred seventy psi. (Enclosures 80, 81, 82, 83)

72. At the time of the accident, six of the ship's eighteen fire pumps were out of commission. Five of the six inoperable pumps

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served the port loop of the ship's firemain system. As a result, when material condition Zebra was set, only a four thousand gallons per minute (GPM) firemain pumping capacity was available on the port side, instead of a normal 11,000 GPM. (Enclosures 57AD, 83, 104, 105)

73. When 610 struck A-7 403, a fuel leak started, causing a sizable spill underneath the aircraft. The flight deck crew moved 403 away from the other aircraft while repair party 7B blanketed the fuel spill with AFFF and provided a hose team escort while the aircraft was being towed to the fantail parking area. Repair party 7B and 7A conducted damage investigation on the 03 level amidships and aft, and assisted in moving ordnance from the area adjacent to the island to number three deck edge elevator. (Enclosures 14, 84, 85, 86, 87, 88, 89)

74. The MB-5 crash truck and the P-16 fire unit were not "nursed" during the fire. (Enclosures 65, 66, 106, 159)

75. The following AFFF hose stations were used in fighting the fire: Stations 4, 3A, 3B, 5, 7, 8 9B and 10. Both two and a half inch and one and a half inch hoses were used. One and a half inch stations carry one hundred fifty feet of hose. Soft rubber two and a half inch hoses are installed in baskets or on racks and vary in length from one hundred fifty feet to three hundred fifty feet. Additional hose sections were added during the fire for greater reach. (Enclosures 65, 69, 71, 85)

76. The only known use of the new in-line AFFF inductor was by 7F hose team. (Enclosures 102, 103)

77. The two-speed AFFF pump station number five was momentarily secured when the AFFF tank ran dry. The operator states he shut the pump off, to prevent damage, refilled the tank and reactivated the pump. (Enclosures 81, 100)

78. Transfer of AFFF along the second deck was interrupted due to the rupture of flange gaskets on the cut-out valve located between AFFF stations number nine and eleven and on another valve located between stations number eleven and fifteen. (Enclosures 57AN, 72, 73, 81, 100)

79. The ship's information book states that the AFFF transfer main runs along the second deck with branches to each of the twenty AFFF stations. (Enclosures 100, 104)

80. Attempts were made to fill AFFF tanks by pouring concentrate from 5 gallon cans into the pressure/vacuum breach openings on the individual tanks. (Enclosures 69, 72, 81)

81. Tank fill tubes on the hangar deck are located above AFFF stations six and thirteen. AFFF concentrate from fifty-five gallon drums was added through these tubes to resupply AFFF tanks. This was a slow process. (Enclosures 72, 73, 81, 57AO)

82. Communications from the flight deck on-scene leader and other key personnel were hampered by faulty SRC-22 radios receiver/transmitter and AN/PRC-56 headset radios. Personnel with headsets had some success communicating directly with Primary and Flight Deck Control, but they could not communicate among themselves. The Air Officer directed firefighting efforts over the 5MC flight deck system. (Enclosures 64, 65)

83. Two explosive ordnance disposal technicians were on the flight deck. Neither of them had been issued the AN/PRC-56 radio headsets required by the CV NATOPS Manual, Para 531. (Enclosure 75)

84. The three F-14 aircraft, (107, 111, 221) involved in the fire were each configured with one (1) AIM-7F Sparrow missile,

one (1) AIM-9L Sidewinder missile, one (1) AIM-54 Phoenix missile, and a quantity of 20MM target practice ammunition. Aircraft number 107 had just been refueled. (Enclosures 75, 78, 91)

85. The fire area on the deck was limited to approximately four thousand square feet. The majority of the fire was under and around aircraft number 107. (Enclosure 14, 15)

86. The fire was fed by a continuous flow of JP-5 fuel from Aircraft 107. (Enclosures 65, 78)

87. Throughout the fire, numerous hoses were trained on the missiles in an attempt to keep them cool. (Enclosures 67, 74, 75, 76, 77, 78)

88. Approximately twenty-eight minutes after the fire began, the on-scene leader declared the fire "OUT". Firefighters started into the area to commence overhaul of the fire. "At Time" 0019:53, shortly after the order to move in, the Sparrow missile warhead from Aircraft 107 detonated (Enclosures 14, 65, 66, 57BI)

89. In addition to the Sparrow Missile explosion at 0019:53, the PLAT tape indicates that there were explosions at the following times during the course of the fire:

2351:56
2357:25
2357:29
0007:35

(Enclosures 14, 57AT, AM, AU)

90. The Sidewinder missile on the port wing launcher of aircraft 221 was pushed into the nose section of aircraft 111. The missile suffered no obvious damage due to the fire. (Enclosures 57Y, 57BT, 91)

91. The horizontal stabilizers of 107, 111, and 221 were either partially or completely destroyed by fire. These structures contained boron fiber composite material. (Enclosures 57W, 57AT)

92. Salvage/jettison personnel clearing the wreckage were protected from boron fibers in the residue of the F-14 horizontal stabilizers through the use of gloves and surgical masks. The wreckage area was thoroughly washed with salt water following wreckage removal. (Enclosures 57AT, 57BQ, 64)

93. The Phoenix missiles on Aircraft 107 and 221 were burned, but did not detonate. Both missiles were down-loaded with the help of EOD Group TWO Detachment, Cecil Field personnel, and were jettisoned overboard at approximately 1400, 27 May 1981, in three hundred five fathoms of water. (Enclosure 75)

94. The 20MM ammunition contained in the M-16 cannon which had not "cooked-off" during the fire remained with the two F-14 aircraft (107, 111) when they were jettisoned on the afternoon of 27 May. EA-6B 610 was also jettisoned. (Enclosure 75)

95. The flight deck COUNTERSMEASURE WASHDOWN/AFFF flush deck nozzle system was CASREPED by NIMITZ 261414Z MAR 1981, CASREP Number 3368/81-053. A minimum of 90% operation for the flight deck nozzles is required by NATOPS 00-80R-14 Firefighting and Rescue Manual, Page 8-4A, paragraph (4). Only 82% to 86% availability was obtained during the last recorded test, 28 March 1981, as indicated by DCA records. (Enclosures 72, 73, 100, 107)

96. The COUNTERSMEASURES/AFFF flush deck nozzles system requires a total of three hundred ninety cleanout fittings. Only three hundred had been installed by ship's force prior to the fire. (Enclosures 72, 73, 100, 109)

97. The monthly air department training report reflected that 96% of the department personnel had completed firefighting training. (Enclosure 108)

98. The ship's fire bill requires only AFFF stations 1, 2, 19 and 20 to be manned when AFFF stations are energized. No provisions are made for GO manning. (Enclosures 93, 106)

99. Only two of the AFFF stations out of twenty on the flight deck have sound powered handsets which would allow the station operator to communicate with the second deck AFFF Station Operator. (Enclosure 65)

100. All one speed injection pump controllers have hinged covers installed over the local control start buttons at the AFFF stations. Padlocks are installed to prevent unauthorized activation. The cover for the controller on AFFF station #2 was forced open to gain access to the local controls. (Enclosures 57E, 72, 109)

101. The "power available" lights on all AFFF injection pumps were installed by Norfolk Naval Shipyard per SHIPALT CVN 6061K. (Enclosure 97 diagram)

102. There is a twenty zone indicating panel in Central Control which signals when an AFFF station has been activated. The panel does not distinguish between operation of the one speed injection pump and the two-speed pump. (Enclosures 57AD, BX, 81)

103. During the February 1981 flight deck certification tests, the following AFFF concentration percentages were obtained for the WASHDOWN zones involved in this fire:

Zone 1	6.3%
Zone 2	9.1%
Zone 3	8.2%
Zone 4	8.5% (Enclosure 110)

104.

(Enclosures 65, 73, 105)

105. All AFFF and salt water hoses on the flight deck were equipped with adjustable pattern "vari-nozzles." To distinguish the AFFF nozzles from the salt water nozzles, the salt water nozzles had been marked with red reflective tape. (Enclosure 65)

106. No salt water applicators were used during the fire. (Enclosure 65)

107. Approximately twelve thousand nine hundred gallons of AFFF concentrate were expended fighting the fire. (Enclosures 73, 81)

108. AFFF two and a half inch hose valves on NIMITZ are vertical, necessitating a sharp bend in the hose when stowed in flight deck stowage baskets. (Enclosure 57BY)

109. COMNAVSEASYS COM message 140427Z MAR 81 recommended that all aircraft carriers test operate all AFFF pumps once a week pending revision of the applicable quarterly PMS card. The message was received aboard NIMITZ, but routed incorrectly to Deck Department for action. (Enclosure 112A) CARGRU EIGHT Message 181204Z MAR 81 directed action be taken on items contained in the NAVSEA 140427Z MAR 81 message including the weekly test run of injection pumps. (Enclosure 112B) The CARGRU EIGHT message was either not received or was also routed incorrectly. (Enclosure 81) CTG Seven Zero

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PT Nine (CARGRU EIGHT) 060304Z MAY 81 message was received requesting action taken. This message prompted NIMITZ 082232Z MAY 81 (Enclosure 112C). Engineering personnel finally received CARGRU EIGHT 181204Z MAR 81 on 9 May 1981. On 19 May NIMITZ sent a message (NIMITZ 190543Z MAY 81) stating that action required by COMCARGRU EIGHT 181204Z MAR 81 message had been taken. (Enclosure 112D) In fact, at the time of the accident the weekly test had not been implemented aboard NIMITZ. (Enclosures 81, 72, 104, 109, 228)

110. PMS maintenance requirement A-639/19-50 S-7R, "Inspect and flush flight deck edge spray nozzles," was scheduled on all twenty zones for completion during the week of 18 - 25 May 1981. The maintenance action was re-scheduled on all zones due to aircraft on the flight deck. (Enclosures 57BZ, 111)

111. PMS maintenance requirement A-639/19-50 Q-17, "Test operate flight deck injection pump; test relief valve," was scheduled on all twenty zones for completion during the week of 11 - 18 May 1981. The maintenance action was partially completed on all stations. All areas of maintenance action were completed including the running of the injection pumps. The action was given a partial complete because the injection pump suction side pressure gauge required in step eight had not been installed in the system. That step could not be accomplished in accordance with the PMS Card. OPNAV Form 4790.2K Job sequence number ERIO-0200/1801 was submitted to install gauge on suction side of flight deck injection pump. A FEEDBACK REPORT was submitted requesting clarification on whether or not the step can be removed from the MRC. (Enclosures 57BZ, 111, 228, 229)

112. PMS Maintenance requirement A-639/19-50 M-1, "Operate solenoid operated pilot valves manually," was scheduled and completed during the week of 4 - 11 May 1981. (Enclosures 57BZ, 111)

113. Records show no preventive maintenance irregularities on the MB-5 and the P-16 that was next to the island at the time of the accident. Records for the P-16 on the bow were turned over to NARF Norfolk with the vehicle. (Enclosures 65, 92)

SHIP CONTROL AND SEARCH AND RESCUE

114. Immediately upon 610's impact and explosion, the Commanding Officer of NIMITZ took the CONN, ordered the sounding of General Quarters, and commenced maneuvering the ship. Initial maneuvers were "All Engines Back", followed in close succession by "Left Thirty Degrees Rudder", "All Engines Ahead Standard", "All Ahead Full", and 999 RPM (setting maximum acceleration rates). During the left turn ordered by the Captain, the relative wind speed began to rapidly diminish, from 27 knots at time 2352 to 10 knots at time 2356. The relative direction of the wind shifted during this turn, from a bow to stern direction to a condition in which the wind was from the starboard beam, blowing to port. At time 2356, the ship was ordered to steady on course Zero Nine Five degrees true, and the engines ordered to all ahead one-third, then to "All Stop". Steerageway was lost at time 0003, after which engines were again ordered to all ahead one-third. The ship's heading was ordered to Zero Two Zero degrees true at time 0009. This turn to course Zero Two Zero degrees true resulted in a shift in relative wind direction, with resultant wind blowing from starboard quarter to port bow, with relative wind speed varying between ten knots (time 2356) and fifteen knots (time 0020). (Enclosures 3, 14, 113, 114, 115)

115. At time 0020 (Deck Log Time) the fire was visually out on the flight deck. NIMITZ was on course Zero Two Zero degrees

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true, at a secondary explosion occurred at time 0021 (Deck Log Time) in vicinity of number two catapult. NIMITZ maintained course Zero Two Zero degrees true at three knots until time 0040, at which time five knots was ordered the rudder ordered to right thirty (30) degrees, 999 RPM sec. This turn and acceleration order was modified at time 0041 to all ahead standard, and steady One Eight Zero degrees true. Various engine orders and rudder angle orders were given until the ship was steady on course One Eight Zero degrees true at time 0049. Relative winds during the time of this turn from course Zero Two Zero degrees true until the ship was steady on course One Eight Zero degrees true increased in speed from fourteen (14) knots to Thirty-three (33) knots, with the direction of relative wind changing from a starboard quarter aspect to a port bow aspect. The weather during the time of this turn was deteriorating, with light rain and thunderstorms reported. (Enclosures 3, 5, 14, 113, 114, 115, 116)

116. NIMITZ continued on course One Eight Zero degrees true, at five knots. The weather continued to deteriorate. Relative winds gusted as high as Forty-two knots at time 0051. Visibility was reduced to three miles and there was thunder and rain present. At 0058 right Twenty degrees rudder, to course Two Two Zero degrees true, was ordered. This turn was continued right to course Two Four Zero degrees true, as the rainstorm continued. The ship turned right to course Two Seven Zero degrees true at 0123, and at time 0128, the rain stopped with visibility three miles in fog; the thunderstorms had moved northeast. The ship maintained course Two Seven Zero degrees true, with speed orders varying between three and ten knots, until NIMITZ secured from General Quarters and called for a muster of all personnel at time 0219. (Enclosures 3, 5, 14, 113, 114, 115, 116)

117. The SAR effort commenced immediately upon the crash of 610 on the flight deck. SH-3 helicopter 734 was duty plane guard, located approximately three (3) miles on the starboard beam of NIMITZ at the time of the accident. 734 vectored immediately inbound and established a search in the wake of NIMITZ. This search revealed no sightings of personnel in the water. Aircraft 735 launched approximately twenty minutes after the crash and commenced searching. USS MOOSBRUGGER operating in the vicinity of NIMITZ was immediately ordered into the area where the crash occurred. (Enclosures 3, 114, 117, 118, 119, 120, 121, 122, 123)

118. USS MOOSBRUGGER conducted a continuous search of the accident area, remaining on station until 1000, 27 May 1981. MOOSBRUGGER found no personnel in the water (Enclosures 3, 132)

119. Helicopter and ship search of initial accident locale, and the locale of secondary explosion was conducted, using MOOSBRUGGER and two helicopters, 734 and 735. Continual and repeated low altitude passes were made in area of the wake and in vicinity of port beam at time of secondary explosion with negative results. Control of 734 and 735 was provided by air controllers from NIMITZ and MOOSBRUGGER, coordinating search areas and control data on a single clear frequency. At approximately 0115, 734 landed on MOOSBRUGGER and was refueled, after which 734 continued the search until it landed on NIMITZ at 0350. 735 was recovered aboard NIMITZ at 0330. (Enclosures 3, 114, 117, 118, 119, 120, 121, 122, 123)

120. In spite of several reports of men being blown, or falling over the side of NIMITZ, neither USS NIMITZ, USS MOOSBRUGGER, 734 or 735 sighted anyone in the water. Visibility was reduced during much of the time, necessitating 734 or 735 to operate at forty feet. Sea state and foam in the water made searching

difficult. Searchlight and Aldis lamps were used by both aircraft. Searchlight operations by NIMITZ and MOOSBRUGGER were continuous. (Enclosure 3, 114, 117, 118, 119, 120, 121, 122, 123)

PERSONNEL CASUALTIES AND MEDICAL

121. 1st LT White had slept between three and four hours in the afternoon on the day of the accident. He was in the habit of getting approximately eight hours of sleep a night and he was reported to have obtained at least that amount on the night prior to the accident. (Enclosures 124, 125)

122. 1st LT White reported that he suffered from a head cold on the day of the accident and removed himself from the flight schedule on the morning of the accident because of it. (Enclosures 124, 125)

123. 1st LT White stated on the afternoon of the accident that he felt better and was able to clear his ears after three or four hours of sleep. (Enclosure 125)

124. A bottle of nasal spray was found in a pocket of 1st LT White's flight suit following the accident. (Enclosure 126)

125.

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(Enclosure 127)

126.

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(Enclosure 128)

127. The two officers packing 1st LT White's personal effects following his death and in these effects. (124, 133)

128.
(Enclosure 129)

B6

129.

B6

124)

(Enclosure

130. The last entry in 1st LT White's Health Record indicating contact with the Medical Department was 27 April 1981 for entry of 1st LT White seeking any medical attention is present following this instance. Review of the entire record shows no evidence of his ever having been (Enclosure 131)

No health record

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131. OPNAVINST 3710.7K General NATOPS prohibits self-medication in Naval Aviation personnel (Enclosure 130)

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132. 1st LT White had recently finalized a divorce from his first wife and had remarried just before leaving to go to sea. Squadron members were unaware of any psychological stresses having an effect on 1st LT White's performance. (Enclosures 124, 125, 132, 133)

133. The following summarizes psychophysiological factors which were present during the accident flight:

- A.
- B. ^{BU} The pilot had boltered his first approach.
- C. It was a very dark night with little or no horizon.
- D. There was an 18 minute delay between the pilot's first and second approaches.
- E. The primary divert field changed during the flight to one more distant and unfamiliar to the pilot.
- F. The accident aircraft was 200 pounds below bingo fuel at the ball call.
- G.
- H. ^{BU} The pilot had a total of 13 night carrier arrested landings.
(Enclosures 7, 8, 9, 10, 14, 18, 19, 20, 22, 31, 39, 40, 47, 48, 124, 125, 127)

134. Both the controlling and backup LSO's reported themselves to be feeling well, without being unduly or unusually fatigued. Both had current physical qualifications to Service Group I standards. Neither reported psychological stress. (Enclosure 39, 40, 134, 135)

135. The controlling LSO had slept six hours in the previous twenty-four hours. He had been awake 16.3 hours at the time of the accident. (Enclosure 40)

136. The backup LSO had slept eight hours in the previous twenty-four hours. He had been awake 12.8 hours at the time of the accident. (Enclosure 39)

137. Physical evaluation was not done on, and body fluids for toxicologic study were not obtained from, the LSO's following the accident. (Enclosure 136)

138. A call was made on the Ship's Service telephone informing the bridge of Mass Casualties on the 03 level, forward on the starboard side. There were no Mass Casualties in this specific area, however, multiple casualties were treated at the Forward Auxiliary Battle Dressing Station (BDS) on the 03 level forward. (Enclosures 137, 138, 139)

139. Efforts to identify the person calling the bridge with information of Mass Casualties on the 03 level forward were unsuccessful. (Investigator's Observation)

140. The Bridge notified the Medical Coordinator in Central Control, of Mass Casualties on the 03 level forward. (Enclosure 137)

141. "Mass Casualty in Compartment 03-49-3-Q" was passed over the LMC at time 0001, 27 May. (Enclosure 3, 94, 140, 141, 142)

142. The evacuation route for Mass Casualty from Compartment 03-49-3-Q was passed over the LMC by the Medical Coordinator, in Central Control, at time 0009. (Enclosures 94, 140, 143)

143. The Ship's Medical Officer repeatedly made calls to Central Control to determine mass casualty location without receiving the information requested. (Enclosures 136, 144)

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144. On the Flight Deck, deck edge elevator number three was designated as the casualty elevator/triage area over the 5 MC.

(Enclosure: 15)

145. Multiple casualties were transported from the Flight Deck via deck edge elevator number three to the Hangar Deck and then via the upper stage number three weapons elevator to the second deck triage area. (Enclosures 145, 146, 147, 148, 149)

146. Approximately six to eight casualties were transported in stretchers from the 03 level down ladders to the Hangar Deck. (Enclosures 139, 147)

147. The Flight Deck Triage Team consisted of:

- Medical Officer - Flight Surgeon
- Dental Officer
- Four Flight Deck BDS Hospital Corpsmen
- Two Flight Deck BDS Dental Technicians
- Eight Assigned Stretcher Bearers

(Enclosure 150)

148. The Flight Deck Triage Team did not go to the Flight Deck Triage Area designated over the 5MC. They were dispersed over the Flight Deck and in the Flight Deck Battle Dressing Station treating casualties. (Enclosures 145, 146, 149, 151, 152, 153)

149. Casualties received initial treatment by Flight Deck Triage Team members and other medical personnel at all three Auxiliary Battle Dressing Stations on the 03 level, at various points at the fire scene, and at deck edge elevator number three. (Enclosures 139, 144, 145, 146, 149, 151, 152, 153)

150. Patients arrived at the second deck triage area without a triage classification or identification. (Enclosure 136)

151. The Assistant Air Officer in Primary Flight Control watched the entire path of 610 as it proceeded up the deck until impact/explosion. He observed no evidence of ejection attempts by any crewmember prior to the explosion. (Enclosure 15)

152. The cockpit area of 610, including the area where the ECMO3 seat would have been located, was destroyed. (Enclosure 57BN, 159)

153. A photograph of the post-crash wreckage shows a section of the starboard horizontal stabilizer of 111, which was overlying the ECMO3 position in the rear cockpit of 610, to be missing. The remaining stabilizer is torn and deformed upward in a curved pattern around the underlying seat area. (Enclosure 57BM)

154. All ejection seats from 610, with the exception of the ECMO3 seat, were accounted for by markings on the recovered seats. (Enclosure 15)

155. The wreckage of 610 was inspected before jettison and no bodies were found in it. (Enclosure 65, 159)

156. Medical assistance in the form of a General Surgeon, Orthopedic Surgeon, Anesthesiologist, and medical supplies were requested from Naval Regional Medical Center (NRMC), Jacksonville, between 0106 and 0114, 27 May. (Enclosures 94, 136)

157. Medical assistance in the form of the requested medical officers, a flight surgeon, drugs and approximately fifteen Hospital Corpsmen arrived via helicopter from NRMC Jacksonville, between 0233 and 0405. (Enclosures 136, 140, 152, 155)

158. Air evacuation of the injured to NRMC Jacksonville began at 0329 with five patients, and continued at 0444 with four patients, at 0509 with six patients, and at 0524 with six patients. Air evacuation was by three Navy and one Coast Guard helicopter. (Enclosures 140, 152, 155)

159. Thirteen bodies were recovered from the area of the accident wreckage. The bodies of AA Barnhart, AR Iannetti, FN Driscoll, AN Louis, AEAN Wildermuth, AO3 McLauren, AN Hinojosa and AN Colon

. Identification of these bodies was made by dental record and fingerprint comparison. (Enclosures 156, 157)

160.

(Enclosures 158, 167, 169, 170, 173, 178, 179, 180, 181)

164. The following is a record of those who died as a result of the accident and the known circumstances of their death:

a. Capt Elwood M. Armstrong, USMC, was found dead strapped in his ejection seat atop the port wing of 107. His body was one of four recovered the morning following the accident. Autopsy findings indicate death as a result of . (Enclosures 57BU, 65, 66, 158, 159)

b. AA Thomas E. Barnhart, USN, was found dead in the vicinity of the wreckage of 107. His body was one of four recovered the morning following the accident. Autopsy findings indicate that death was the result of

(Enclosures 15, 57BU, 65, 66, 156, 157, 159, 161)

c. AN Alberto Colon, USN, was found dead in a in the vicinity of the wreckage of 107. Autopsy findings indicate death as a result of : (Enclosures 57BU, 60, 162, 163)

d. FN Dennis Driscoll, USN, was found dead in a in the vicinity of the wreckage of 107. Autopsy findings indicate death was the result of : (Enclosures 57BU, 163, 164, 165, 166)

e. AR Jackie L. Gothard, USN, was found aft of accident scene near the number two Jet Blast Deflector along the starboard foul line. AR Gothard was standing along the foul line serving as hot chock man when he was struck by 610 as it proceeded down the deck. Autopsy findings indicate that death was the result of

(Enclosures 57BU, 65, 78, 167)

f. AN Arturo Hinojosa, USN, was found dead in a the vicinity of the wreckage of 107. Autopsy findings indicate death as a result of . (Enclosures 57BU, 168)

g. AR Peter R. Iannetti, USN, was found dead in a in the vicinity of the wreckage of 107. His body was one of four recovered the morning following the accident. Autopsy findings indicate death was the

(Enclosures 15, 57BU, 65, 66, 156, 157, 159, 169)

h. ABH3 Robert W. Iser, USN, was serving as MB-5 firetruck driver. He was proceeding in on foot toward the port side of 107 to check the wreckage area after the fire was extinguished when the large secondary explosion of the Sparrow missile occurred. He died at the scene as a result of a . Autopsy findings indicate the cause of death to have been a

in the urine. (Enclosures 57BU, 65, 71, 78, 171, 170, 172)

i. AN Patrick D. Louis, USN, was found dead in a in the vicinity of the wreckage of 107. AN Louis was the plane captain for 107 and a body was seen in the front cockpit of the burning aircraft prior to ejection seat "cook off". His body position depicted in Enclosure 57BU is based on this information and the recovered seat position. Autopsy findings indicate death as a result of

Enclosures 57BU, 65, 173, 174, 175, 176, 177)

j. AO3 James L. McLaurin, USN, was found in a in the vicinity of the wreckage of 107. Autopsy findings indicate death as a result of

(Enclosures 57BU, 60, 163, 177, 178)

ids

k. AA Frank J. Swider, Jr., USN, was serving as a crash rescueman. He was proceeding in with ABH3 Iser toward the port side of 107 to check the wreckage area after the fire was extinguished when the large secondary explosion of the Sparrow missile occurred. He died at the scene as a result of a . Autopsy findings indicate the cause of death to have been

(Enclosures 57BU, 65, 71, 78, 171, 172, 179)

l. 1st LT Steve E. White, USMC, was found dead strapped in his ejection seat on the flight deck to the starboard side of the ship's centerline abeam the port tail section of 107. Autopsy findings indicate death as a result of

(Enclosures 57BU, 65, 78, 159, 180)

m. AEAN Ronald Wildermuth, USN, was found dead in a , most probably atop the fuselage of 107. His body was one of four recovered the morning following the accident. Autopsy findings indicate death as a result of (Enclosures 57BU, 65, 66, 156, 159, 182, 183, 184)

162. The following personnel sustained lost-time injuries in excess of twenty-four hours no duty status:

a. was injured when struck in the right upper abdomen and lower chest with a piece of shrapnel. This injury occurred as a result of the secondary Sparrow missile explosion while serving as a hose team leader on the port side of 107 in front of the MB-5 truck. He was initially treated in the ship's medical department where he was operated on by the ship's surgeon to correct a right pneumothorax (collapsed lung) with a chest tube and to clean and close the wound. A laceration of the liver was present at that time but had minimal bleeding. He was

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transferred by air to NRM Jacksonville where he was operated on again to completely correct his injuries. As of 3 June 1981 he was considered in good condition with an expected period of hospitalization of fourteen days with a return to full duty after fourteen days convalescent leave. His physician, Dr. _____ believes that _____ injuries will not lead to permanent disability. This is a twenty-eight day lost time injury. (Enclosure

b. _____ was injured when struck by shrapnel in his left hip causing a contusion and in the neck where a fragment was embedded in a laceration. His injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team about twenty feet aft of the wreckage of 107 near the number two Jet Blast Deflector. He was taken to the ship's medical department where three attempts to remove the retained shrapnel fragment in his neck were unsuccessful. After the ship returned to port on 28 May 1981, he was transferred to NRM Portsmouth where he was evaluated and the decision was made to leave the fragment in place. He was discharged to full duty with fourteen days convalescent leave on 31 May 1981. His inpatient medical record was reviewed by the medical officer assisting in this investigation and he is of the opinion that no permanent disability should result from this injury based on that record. This is a nineteen day lost time injury. (Enclosures

c. _____ sustained a compound fracture of the left upper arm near the elbow with shrapnel embedded in the elbow area and a compound fracture of the right little finger with embedded shrapnel. These injuries occurred as a result of the secondary Sparrow missile explosion while manning a hose team between number one and number two catapults to starboard of the fire. He proceeded on his own to the ship's medical department for initial treatment and was then transferred by air to NRM Jacksonville for further care. Here he was operated on to remove the shrapnel from his elbow and finger and to close the wounds. The fractures were treated with casts. His physician, Dr. _____, believes that _____ has a good prognosis but may suffer some loss of motion in his elbow and little finger, possibly resulting in some degree of permanent partial disability. Such an evaluation is to be deferred until the completion of treatment. As of 5 June 1981, his condition was good with anticipated transfer to NRM Charleston, SC, on 9 June 1981, for further treatment and Medical Board disposition. This is an undetermined lost time injury. (Enclosures

d. _____ was burned about the face, hands, back, arms, and thighs in the fire at the time of the crash. He was inserting safeing pins in the ejection seats of 111 at this time and was struck by flying debris and then burning fuel. He fell into the catwalk where he rolled over to extinguish the flames. He then walked to sick bay, via Flight Deck Control, where he was treated prior to transfer by air first to NRM Jacksonville and then to Brooke Army Medical Center. He was burned over thirty-two and one-half percent of his body surface and is presently in satisfactory condition. Determination of any degree of permanent disability is deferred until completion of treatment. This is an undetermined lost time injury. (Enclosures

e. _____ was struck in the right arm by shrapnel resulting in a compound fracture of both bones in his forearm and fracture of his upper arm. This injury occurred as a result of a secondary explosion (not the Sparrow) while directing hose teams near the number two Jet Blast Deflector. He was initially treated in the ship's medical department and then transferred by air to NRM Jacksonville. Here he was operated on and his fractures repaired. As of 3 June 1981, he was considered in good condition and was transferred to NRM Philadelphia for

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medical board evaluation and further disposition on 9 June 1981. His physician, Dr. , believes that permanent disability could possibly result from this injury but that a final determination could not be made until the completion of treatment. This is an underdetermined lost time injury. (Enclosures)

f. was injured when struck by shrapnel in the neck, the left armpit and right thigh. The shrapnel causing the neck wound penetrated to the spine where it fractured a cervical vertebra and lodged against the spinal cord causing injury to it. This injury occurred as a result of the secondary Sparrow missile explosion while fighting the fire and assisting in safeing weapons as a member of the Explosive Ordnance Disposal Team. He was moved to the ship's medical department where evaluation showed paralysis below the neck and he was transferred by air to NRMC, Jacksonville. From there he was transferred to St. Vincent's Hospital in Jacksonville where neurosurgical capability was available. Here he was operated on to remove the metal fragment lodged against his spinal cord and had the fractured vertebra fused with an adjoining one. His physician, Dr. believes that condition was guarded with a very high probability of permanent disability in the form of quadraplegia. could not provide a written or orally given statement because of his medical condition. It is expected that he will be transferred to a Veteran's Administration Hospital shortly. This is an undetermined lost time injury. (Enclosures)

g. received first and second degree burns of the face, hands, lower back and both lower legs covering less than ten percent of his body surface area. His injury occurred during the initial crash and fire while he was working in the nose wheel well of 111. He was blown off of his feet and partially covered with debris and fire. He extinguished his burning clothing by rolling over on the deck and then was assisted to the ship's medical department for initial treatment. He was then transferred by air to NRMC Jacksonville for further treatment. As of 7 June 1981, his condition was considered good with an expected period of hospitalization of twelve days and a return to full duty following seven days of convalescent leave. physician, Dr. was of the opinion that no permanent disability was anticipated. This is a twenty-four day lost time injury. (Enclosures)

h. struck his right knee when he was knocked down by several people running from the secondary Sparrow missile explosion. He continued to fight the fire on a hose team from the port catwalk area. He was examined in the ship's medical department and found to have a severe bruise of the right knee. He was returned to full duty following three days of no duty and one week light duty. This is a three day lost time injury. (Enclosure)

i. sustained shrapnel wounds to the left thigh, right face and right upper arm. His injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team to the left side of the MB-5 truck. He was initially treated in the ship's medical department and then transferred by air to NRMC Jacksonville where he was operated on to repair the wound in his right arm. His other wounds were treated with antibiotic ointment. He was discharged to full duty with eleven days of convalescent leave on 30 May 1981. His inpatient medical record was reviewed by the medical officer assisting in this investigation and he is of the opinion that no permanent physical disability is anticipated based on this record. This is a fifteen day lost time injury. (Enclosures)

ship's medical department where no laceration was found but because of concern over possible tendon injury he was transferred by air to NRMC Jacksonville for further evaluation. There he was found only to have a contusion and abrasion of the knee and treated with immobilization of the knee. He was discharged to full duty with five days of convalescent leave on 29 May 1981. His physician, Dr. [redacted] in, was of the opinion that no permanent disability is anticipated as a result of this injury. This is a seven day lost time injury. (Enclosures

o. [redacted] was struck in the left foot by shrapnel which became embedded in the foot. His injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team between the bow catapult tracks to starboard of the fire. He was transferred by air to NRMC Jacksonville where he was operated on to remove a metal fragment from the sole of his foot. He was discharged to full duty with twentyone days convalescent leave on 1 June 1981. His physician, Dr. [redacted], was of the opinion that injury should not cause permanent disability. This in a twenty-seven day lost time injury. (Enclosures

p. [redacted] was struck on the right side of the face and above the right eye by shrapnel resulting in laceration of those areas and blunt injury to the eye. The injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team forward of the number one Jet Blast Deflector on the port side of the catapult track. He was taken first to the ship's medical department where he was treated for shock and had his lacerations sutured. He was then transferred by air to NRMC Jacksonville for further treatment. Here he was found to additionally have injury to his right eye with blood in anterior chamber of the eye, injury of the nerves of his right face preventing some facial movements, injury to his right retina and a traumatic cataract in the right eye. His physician, Dr. [redacted], is of the opinion that [redacted] may suffer a loss of vision in the right eye and continue to have a decreased ability to control the right side of his face and mouth, either or both possibly causing a permanent partial disability. This should become clearer in the future. As of 3 June his condition was reported to be good with an expected period of hospitalization of seven days and a return to duty after thirty days convalescent leave. No medical board evaluation was anticipated at that time. This is expected to be a thirty-seven day lost time injury. (Enclosures

q. [redacted] was injured by shrapnel causing lacerations of both thighs with the shrapnel becoming embedded. His injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team just forward of the number one Jet Blast Deflector. He was the turret operator of the MB-5 truck and had manned the hose after expending the AFFF in the truck. He was initially treated in the ship's medical department where shrapnel was removed from both thighs and the wounds sutured. He was then transferred by air to NRMC Jacksonville where he was observed and had no complications. He was discharged to full duty with fourteen days convalescent leave on 31 May 1981. His inpatient medical record was reviewed by the medical officer assisting in this investigation and he is of the opinion that no permanent disability should result from this injury based on that record. This is a nineteen day lost time injury. (Enclosures

r. [redacted] was injured when shrapnel pierced his left calf. His injury occurred as a result of the secondary Sparrow missile explosion while assisting in fire fighting. He was initially treated in the ship's medical department where the wounds were cleaned and both the entrance and exit wounds were sutured. Following the ship's return to port on 28 May 1981 he was transferred to NRMC Portsmouth

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where he was admitted for further evaluation. No further treatment was required. He was discharged to full duty with fourteen days convalescent leave on 31 May 1981. His inpatient medical record was reviewed by the medical officer assisting in this investigation and he is of the opinion that no permanent disability should result from this injury based on that record. This is a twenty-six day lost time injury. (Enclosures

s. was injured when struck by flying crash and debris during the initial crash. He was struck between the calf and ankle on both legs and knocked down. He was refueling an A-7 parked along the foul line near deck edge elevator number two when it and several other A-7's were struck by 610. He was initially able to walk and assisted on a hose team until the fire was out. At that time he was taken to the ship's medical department where he was retained and treated until the ship returned to port 28 May 1981. He was transferred to NRMC Portsmouth at that time for further evaluation. There he was diagnosed as having a contusion (bruise) of the right calf and treated. He was discharged to full duty with fourteen days convalescent leave on 29 May 1981. His inpatient medical record was reviewed by the medical officer assisting in this investigation and he is of the opinion that no permanent disability should result from this injury based on that record. This is a sixteen day lost time injury. (Enclosures

t. was burned about the face, back, hands, upper arms and buttocks in the fire at the time of the crash. He was refueling an F-14 on the port bow from fueling station number two at that time. The fuel nozzle hose connection broke spraying fuel in the area which ignited causing his clothing to burn. Several persons in the area helped him extinguish the fire on his person and then transported him to the ship's medical facilities. He was treated there and then transferred by air first to NRMC Jacksonville and then Brooke Army Medical Center. He was burned over thirty-five and one-half percent of his body surface and is presently in satisfactory condition. Determination of any degree of permanent disability is deferred until completion of treatment. This is an undetermined lost time injury. (Enclosures

u. was burned about much of his entire body in the fire at the time of the crash. He was working in the port catwalk at fueling station number two passing a fueling hose up to AR Pass when the crash occurred and he was engulfed in flames. Two other crewmembers helped tear off his clothing and extinguish the flames, and then helped him to the Forward Auxiliary Battle Dressing Station before he was transferred to the ship's sick bay by stretcher. He was initially treated aboard ship and then transferred by air first to NRMC Jacksonville and then to Brooke Army Medical Center. He was burned over seventy-three and one-quarter percent of his body surface and is presently in very critical condition. He will probably receive a medical disability separation if he survives his injuries. This is an undetermined lost time injury. (Enclosures

v. was struck by shrapnel above the left eye with the shrapnel becoming embedded. His injury occurred as the result of the secondary Sparrow missile explosion while manning a hose team to the left side of the MB-5 fire truck. He was initially treated in the ship's medical department where the shrapnel was removed and the wound sutured. He was then transferred by air to NRMC Jacksonville for further evaluation. There he was observed with no further treatment required. He was discharged to full duty on 2 June 1981. His physician, Dr. was of the opinion that injury is not anticipated to result in any permanent disability. This is a seven day lost time injury. (Enclosures

w. incurred a shrapnel wound of the right anterior chest as a result of the secondary Sparrow missile explosion while fighting the fire. He was treated aboard ship where an unsuccessful attempt was made to remove a small metal fragment from the chest wall. He was seen at NRMC Portsmouth Surgical Clinic upon return to port where the decision was made to leave the fragment in place and that no further treatment was required. He was returned to duty following evaluation at NRMC Portsmouth. This was a three day lost time injury.

(Enclosure

x. was injured by shrapnel in the left hand lacerating tendons to his index and long fingers and causing compound fractures of the index and long finger. Shrapnel also caused lacerations of the right leg and left thigh. These injuries occurred as a result of the secondary Sparrow missile explosion while serving as a rescueman approaching the port side of the wreckage of 107 after the fire was extinguished. He was initially treated in the ship's medical department where the laceration on his left thigh was sutured. He was then transferred by air to NRMC Jacksonville where he was operated on to repair the fractures of the fingers and the severed tendons. He was transferred to NRMC Portsmouth on 2 June 1981 for further treatment by a hand surgery specialist. It should be noted that

His physician at Jacksonville, Dr. was of the opinion that any degree of permanent disability cannot be determined at present but that it is a possibility. This determination must be deferred until the completion of treatment. This is an undertermined lost time injury. (Enclosures

y. sustained a spontaneous right pneumothorax (collapsed lung), a compound fracture of the left knee and kneecap, and a puncture wound of his right arm. These injuries occurred as a result of the secondary Sparrow missile explosion while fighting the fire about ten to fifteen feet from the wreckage. He was moved to the ship's medical department for initial treatment where a chest tube was inserted to reinflate the lung. He was then transferred by air to NRMC Jacksonville where he was operated on to remove his left kneecap and treat his arm wound. His physician, Dr. was of the opinion that a determination as to any permanent disability cannot be made at present and must be deferred to the completion of treatment which may be as long as six months. As of 5 June his condition was reported as good with anticipated transfer to NRMC Oakland, CA on 9 June 1981 where a medical board evaluation with six months limited duty would be done. This is an undertermined lost time injury. (Enclosures

z. was injured when struck on the top of the head by shrapnel with loss of an approximately two inch diameter section of his scalp. This injury occurred as a result of the secondary Sparrow missile explosion while serving on a hose team beside the MB-5 truck on the starboard side of the fire. He was initially treated in the ship's medical department and then transferred by air to NRMC Jacksonville. There he was operated on to cover the wound area with a rotated flap of his own scalp. He was discharged to full duty with 14 days convalescent leave on 29 May 1981. His physician, Dr. was of the opinion that no permanent disability would result from this injury. This is a sixteen day lost time injury. (Enclosures

aa. was injured when struck by shrapnel in the right foot and ankle. This injury occurred as the result of the secondary Sparrow missile explosion

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while directing rescue operations on the port side of 107 following extinguishing the fire. He was initially treated in the ship's medical department where he was operated on by the ship's surgeon to stop arterial bleeding. He was then transferred by air to NRMJ Jacksonville where he was again operated on to clean the wound and remove foreign bodies embedded in the bones of the foot and leg. There was heavy damage to the bones, tendons and blood vessels of the foot near the heel and ankle. The foot and ankle were again operated upon on 3 June to restore as much function as possible. He was discharged to the Medical Holding Company, NRMJ Jacksonville on 5 June 1981, pending a medical board evaluation. His physician, Dr. [redacted] was of the opinion that [redacted] has a good prognosis but that due to the degree of injury a finding of any permanent disability would be deferred until the completion of treatment which may take up to six months. This is an undetermined lost time injury. (Enclosures

163. The following personnel were injured but not to a degree to cause lost time in excess of twenty-four hours:

a. [redacted] injured his back while carrying injured on stretchers and/or when he slipped and fell at the time of a secondary explosion. He was treated in the ship's medical department the following day with pain medication and a cane for back strain. He was returned to full duty after six days of light duty. This is not a lost time injury. (Enclosure

b. [redacted] was struck in the right forearm and right thigh with shrapnel causing a puncture laceration of the forearm and bruise of the thigh. The injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team on the starboard bow. He was treated in the ship's medical department where the forearm wound was cleaned and dressed. He was returned to full duty immediately. This was not a lost time injury. (Enclosure

c. [redacted] was struck in the left thigh by a piece of shrapnel causing a laceration. The injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team. He was treated in the ship's medical department where the wound was cleaned and sutured. He was returned to full duty immediately. This was not a lost time injury. (Enclosure

d. [redacted] was struck in the back of the head by an unknown object and received first and second degree burns on the left face, left hand and left back in the course of the initial crash, explosion and fire. He was standing near the forward port side of 107 after assisting in its dearming. He was treated for his burns in the ship's medical department and returned to full duty immediately. This was not a lost time injury. (Enclosure

e. [redacted] was struck by shrapnel in the left thigh and right biceps. The injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team. He was treated in the ship's medical department where a piece of shrapnel was removed from his right arm and his wounds cleaned and sutured. He was returned to full duty immediately. This is not a lost time injury. (Enclosure

f. [redacted] was struck in the face by debris and had a piece of shrapnel embedded in his left foot. The injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team on the port side of the ship. He was treated in the ship's medical department where the shrapnel was removed from his foot. He was returned to full duty immediately. This is not a lost time injury. (Enclosure

g. was injured when he was struck by an aircraft tow tractor moving an A-7 from the vicinity of the fire. He was assisting in removing tie down chains on another aircraft at the time. He was examined in the ship's medical department and found to have a contusion of the right knee and treated. He was returned to full duty following one week of light duty. This is not a lost time injury.
(Enclosure)

h. was struck in the left hand between the first and second fingers by a piece of shrapnel causing a laceration. The injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team. He was treated in the ship's medical department where the wound was cleaned and sutured. He was returned to full duty immediately. This is not a lost time injury. (Enclosure)

i. was struck in the right knee by flying debris from the secondary Sparrow missile explosion while fighting the fire. He was treated in the ship's medical department for a locking right knee by wrapping it and placed on five days light duty. This is not a lost time injury. (Enclosure)

j. was struck in the right knee by a piece of shrapnel causing a sprain of the knee. The injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team. He was treated in the ship's medical department by wrapping his knee. He was returned to full duty following three days of light duty. This is not a lost time injury. (Enclosure)

k. received first and second degree burns of the face, left arm and left wrist as a result of the fire following the initial impact and explosion. At the time of the crash, he was walking between 111 and 107 after working on 111. He was treated in the ship's medical department where his burns were cleaned and dressed. He was returned to full duty after three days light duty. This is not a lost time injury. (Enclosure)

l. was initially struck by flying debris at the time of the crash and later struck in the face with shrapnel causing a laceration of the chin and a broken tooth. The shrapnel injury occurred as a result of the secondary Sparrow missile explosion while manning a hose team on the starboard side of the ship. He was treated in the ship's medical department where the laceration was cleaned and sutured. He was returned to full duty after two days of light duty. This is not a lost time injury. (Enclosure)

m. was struck in the right calf by a piece of shrapnel. The injury occurred as the result of the secondary Sparrow missile explosion while manning a hose team on the starboard side of the fire. He was treated in the ship's medical department where the laceration was cleaned and sutured. He was returned to full duty. This is not a lost time injury. (Enclosure)

n. was struck in the left upper arm with a piece of shrapnel resulting in an approximate five and one-half inch laceration. The injury occurred as the result of the secondary Sparrow missile explosion while serving as nozzleman on the port side of the ship near 107. He was treated in the ship's medical department where shrapnel was removed, the wound cleaned and sutured. He was returned to full duty. This is not a lost time injury. (Enclosure)

o. was struck in the right forearm by a piece of shrapnel causing a puncture laceration.

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OPINIONS

ACCIDENT

1. 1st LT White was a capable carrier aviator with a limited amount of experience. A combination of events and circumstances developed that put him in a stress situation with which he was unable to cope. Although the ceiling and visibility were not low, the night was very dark - with no horizon and there was considerable lightning and thunderstorm activity in the area. His bolter pass was followed by what must have been considerable frustration and anxiety created by a long, fuel-consuming interval before he was able to make his next approach. He was aware that he was just under his Bingo fuel and that if he did not get aboard he would be going to a field he had never been to before, at night with less than ideal enroute weather conditions. The circumstances were aggravated by the presence of antihistamine in his body that reduced his normal faculties. He had glideslope difficulties in the latter part of his approach. His total concentration was more than likely devoted to watching the lens and putting the aircraft down in the wires. As a result, he dropped his scan and allowed his line-up to deteriorate. The situation was compounded by the fact that he received no line-up call from the LSO, and that the LSO told him to, "Nice and easy, fly it down", after which he made a play for the Deck.
2. Neither CATCC nor the pilot of 610 did anything to conserve fuel during the period between the two passes. Fuel usage indicates that the aircraft was in the "wheels and flaps down" configuration during the entire period, including when directed to climb to 2,000 feet and when making the 360 degree turn for spacing.
3. If there had been a functioning centerline sequenced flasher system, it may have averted the accident by keeping the pilot attentive to line-up.
4. The presence of gradual maneuvers throughout the carrier approach and the pretouchdown maneuver to the left, plus the lack of any communications to the contrary indicate that the accident was not caused by a malfunction of the aircraft's flight control system.
5. 610's significant glideslope control problems were of primary concern to the LSO'S.
6. The landing attitude of the EA-6B, the high position of the aircraft on the glideslope, and the short physical stature (67.5") of Captain Armstrong (ECMO #1) may have precluded his maintaining visual contact with the landing area environment past the in-close position. This could have impaired his ability to provide line-up calls to the pilot.
7. The line-up corrections flown by 1st LT White for most of the approach were appropriate.
8. 610's high, above glideslope position at the ramp combined with its black relationless background, as viewed from the LSO platform, significantly impaired the LSO's ability to see the aircraft's quick right wing drop and the increasing drift right of centerline.

9. The coordinated monitoring of the LSO platform's PLAT, combined with a trained interpretation of the video, would have identified the requirement for a timely line-up correction call to the pilot of 610. This could have prevented the accident.

10. The controlling LSO's actions and calls were in accordance with his perception of 610's approach.

11. Other than 610's maneuver to the left in the final second of flight, the lack of pilot response to the visual line-up cues indicates his attention was focused elsewhere in the last few seconds of the approach.

12. The failure of the crew to properly diagnose the criticality of their situation precluded safe ejection from the aircraft.

13. The primary cause of the accident was pilot error in that the pilot failed to maintain line-up.

14. Contributing to the accident was the lack of a line-up call from the LSO, and his telling the pilot, "Nice and easy, fly it down."

DAMAGE CONTROL AND FIRE FIGHTING

15. The fire was an intense, localized fire, the spread of which was prevented by the use of the various flight deck fire fighting systems.

16.

17.

a.

b.

c.

d.

e.

18. Of the factors listed above.

19. There was very little fire spread beyond the area of initial involvement.

20. It was not necessary to use applicators in addition to the "vari-nozzle". The cooling effect of wide pattern "vari-nozzles" was sufficient.

22. The MB-5 and P-16 would have been more effective had they been able to get further upwind initially. "Nursing" these vehicles may have accelerated the extinguishment of the fire.

23. The use of more in-line AFFF inductors would have produced more foam for fighting the fire.

24. The performance of the hose teams was commendable. Their performance reflected good leadership, discipline, courage, proper coordination, and adequate training. Their action prevented the cook-off of the Phoenix missiles and contained the fire in a small area.

25. If sound-powered phones, had been available at all the catwalk AFFF hose reel stations, the hose reel operators would have been able to communicate with second deck station operators.

26. If Primary had used the installed X-50-J system, they could have communicated directly with personnel manning second deck AFFF stations.

27. Despite conflicting statements, it is believed that the fire was out prior to the secondary explosion of the Sparrow missile.

28. The Sparrow missile positioned on the starboard wing launcher of F-14 aircraft 221 was knocked off the launcher by the tail section of Aircraft 107. The missile was kept cool by hose teams. The Phoenix missile located centerline on Aircraft 107 was severely torched (exterior surface charred but case remained intact). The intense heat from the fire would have caused the warheads to detonate but the cooling effect of the salt water being trained on the missiles by the hose teams kept the temperature below that which would have resulted in cook-off. The Sparrow missile, positioned on the starboard launcher of F-14 aircraft 107 was ejected from the launcher due to heat of the fire igniting the launcher cartridge actuated devices (CAD's). The missile remained among the deck debris, continually cooled by the large quantities of AFFF and salt water that washed over the aircraft. The presence of this missile was not known to the fire fighters. When the fuel and burning debris had been completely blanketed by AFFF, the fire was declared out. Hoses continued to cool the known missiles. Other hoses were secured. Without the additional salt water on the debris-surrounded missile, the foam on deck enveloped the missile warhead, allowing the temperature of the warhead to become uniform. This temperature was above that required for cook-off and the warhead detonated. Besides causing deaths and injuries, a 12 inch long, by 24 inch wide, by 3 inch deep depression was made on the flight deck. (Enclosure 57BK, 75)

29. If more lighting had been available on the forward flight deck, it is possible that the ejected Sparrow missile from Aircraft 107 could have been seen in the debris and, if seen, adequately cooled to prevent detonation.

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30. Fire fighting efforts required information to be passed directly between on-scene leaders and directors without excessive delays. The AN/PRC-56 radio headset is over 15 years old and its history of maintenance problems continues. If the headsets worn by fire fighting leaders had worked more effectively and the EOD Officer had been issued a headset, the fire fighters might have been more aware of the ordnance involved and been able to more effectively concentrate their efforts.

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31. Explosions at 2351:56, 2357:26 and 0007:35 are most probably ejection seats "cooking-off".

32.

33.

34. About 9 May, after receipt of CARGRU EIGHT message 181204Z MAR 81, the ship obtained a copy of NAVSEA message 140427Z MAR 81 from COMNAVAIRLANT headquarters and took steps to implement. At the time of drafting the NIMITZ message 190543Z MAY 81 those responsible for drafting the message, those people who reviewed it and the releaser all believed that the weekly run tests of the injection pumps had been implemented. (Enclosures 81, 72, 227, 109)

35. During the week of 18 - 25 May, the injection pumps were not run. HT1 and HT2 state that the reason for this was a lack of understanding on how to document these checks as a weekly requirement. HT1 further states that he submitted a FEEDBACK REPORT to resolve the problem. HT1 made the decision not to test run the injection pumps that week without consulting anyone higher in the chain of command.

36. Zone 1, 2, 3, and 4 injection pumps were test run during the week of 11 - 18 May by HT3 and HTFA. The best estimate of the day they were run is 16 May. Thus, the pumps were most probably run ten days prior to the accident.

37. Records and past inspections indicate that preventive maintenance on the AFFF systems aboard NIMITZ has been conducted in an outstanding manner. HT1 has been, in large measure, responsible for this maintenance. However, HT1 Adams acted improperly when he made the decision not to run the injection pumps the week of 18 - 25 May. He was aware that the ship had been directed to run the pumps weekly, yet he consciously elected not to carry out the required action.

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38. There was inadequate follow-up action taken by LTJG to insure that the injection pump motors were being run on a weekly basis. Considering the importance of the AFFF system, the high level of interest being shown in the system and the recent direction received to run them weekly, LTJG was remiss in not taking such action.

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39. Protective covers are necessary on AFFF motor controllers to prevent inadvertent or vandalistic actuation. Whether or not padlocked, they should be accessible without the use of tools.

40. The effort to replenish the AFFF tank from five gallon cans through the pressure/vacuum breaker was ineffective. Filling tanks from fifty-five gallon drums in the hangar bay was also ineffective because it was too slow to meet usage rates.

41. The onboard allowances for AFFF would have been depleted if the fire had lasted another 20 minutes.

42. The transfer system was an adequate means of providing a continuous flow of AFFF to the stations requiring additional AFFF.

43.

44. COSAL support for the P-16 needs to be improved.

45. There is a difference between the perception of the flight deck operators and the GSE maintenance personnel regarding the operational status of the P-16's, as shown by comparing enclosures (65 and 92), indicating poor communications between the two groups on the subject.

46. If the Digital Voice Protection Radio System had been installed, the Damage Control Assistant, Assistant Damage Control Assistant and the Fire Marshal would have been able to maintain constant communications with Central Control at remote locations removed from repair party communications circuits. Constant communications would have enabled notifying Central Control immediately of problems with the AFFF system. Use of such a system would have allowed immediate feedback on stations in operation and stations required. The system would have allowed direct coordination of the AFFF transfer and replenishment. This system is currently aboard NIMITZ but has yet to be installed. Enclosure 231 provides a brief description of the system.

SHIP CONTROL AND SEARCH AND RESCUE

47. Commanding Officer, USS NIMITZ (CVN 68), when confronted with a catastrophic situation, reacted in the proper manner in regard to navigation of the ship. The turn ordered shortly after the aircraft accident decreased the relative wind speed, and placed this wind from an advantageous direction for fire fighting, and safety. When it became apparent that a stormline would ultimately pass over the ship, the proper heading was chosen to permit most rapid passing of this storm.

48. The SAR effort conducted during events surrounding the aircraft accident was thorough, timely, and entirely professional. Despite adverse weather conditions, the search of the initial incident location, area of secondary explosion, and the track between these points is considered to have been as complete and thorough as possible.

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PERSONNEL CASUALTIES AND MEDICAL

49. The pilot had a cold which he was treating with a

The side effects of this drug, even at normal blood levels, degrade the mental and physical skills required for flying in general and especially for night carrier landings. The side effects from blood levels 6 to 11 times normal could only further degrade the pilot's skills and possibly contribute to vertigo. The presence of this drug in the pilot combined with other stress factors present precipitated the pilot error which caused this accident.

50. No evidence was found indicating that 1st LT White had received any medication or other treatment from NIMITZ' medical department for his cold.

his own initiative to treat his cold symptoms in violation of directives.

51. The source of 1st LT White's is unknown.

52. The pilot recently was subject to the stresses of divorce and immediate remarriage. Other squadron members could detect no noticeable effect on his performance level. It is considered doubtful that these events were a factor in the accident.

53. There is reason to believe that the pilot was under some degree of increased psychological stress related to low fuel state, weather, operational delays, change to an unfamiliar primary divert, bolter on first landing attempt and limited night carrier landing experience.

54. Available evidence suggests that the pilot had between eight and twelve hours of sleep in the twenty-four hours prior to the accident.

55. There is no evidence of physical illness or incapacitation of either the backup or controlling LSO. Neither indicated a stress level out of the ordinary.

56. "Mass Casualties on the Flight Deck" was not passed over the LMC, despite various conflicting statements to the contrary. While this generated some confusion on the part of the Ship's Medical Officer as to casualty location, it had little effect on overall medical handling.

57. The Bridge should have been aware that the crash and fire on the flight deck was at least a potential disaster of sufficient magnitude to warrant calling away "Mass Casualties on the Flight Deck" as required by para 3.c and 4.b of NIMITZINST 6000.1A.

58. The only route for the evacuation of casualties passed over the LMC was from compartment 03-49-3-Q. While the Air Officer had designated deck edge elevator number three as the triage point on the flight deck, no route was passed to provide for movement from that elevator to the second deck triage area. Excellent individual initiative and effort on the part of various personnel, the Weapons Department members in particular for their rapid manning of weapons handling elevators, made for a smooth transportation evolution. A more aggressive effort by the Medical Coordinator in determining the need for a route from the flight deck would have been appropriate since he was aware of the flight deck crash and fire with its associated potential for multiple casualties. However, even without this route, movement to second deck triage proceeded quite well.

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59. Medical assets on the flight deck were spread from the fire scene to the designated triage area, (deck edge elevator number three) with the Medical Officer treating individual patients in the Flight Deck Battle Dressing Station. The Flight Deck Triage Team Dental Officer surveyed the scene, assisted with first aid at the scene and at the Flight Deck Battle Dressing Station and then went to second deck triage. The flight deck corpsmen roamed the fire scene and flight deck treating and directing patients.

60. Overall medical management of the mass casualty situation was effective although carried out in a non-standard manner regarding on scene management and transportation. It is noted that all casualties who were not killed immediately, survived, with all indications being that shipboard care helped to provide for the best possible prognosis in nearly each case. Multiple comments of satisfaction, with praise for the medical effort, were encountered in the course of the investigation. No adverse comments were noted.

61. Forty-two persons were injured as a result of the crash, explosion and fire. Nine were injured in the initial crash/fire events, of which seven were lost time injuries. Twenty-nine people were injured directly by the secondary explosion of the Sparrow missile, of whom eighteen suffered lost time injuries. One incurred a lost time injury by shrapnel as a result of a secondary explosion other than that of the Sparrow. Three were injured in incidents related to the mishap on the flight deck of which one was a lost time injury.

62. The injuries incurred by those listed below as a result of this incident were incurred in the line of duty, not due to the member's misconduct.
Injured:

B.6	AA	. USN,
	SA	, USN
	AOC	, USN
	AN	, USN,
	ABEC	USN
	CE2	, USN
	AD2	USN,
	ABAN	USN
	AMS3	USN,
	AA	USN,
	AD2	, USN
	AN	Jr., USN.
	AE2	, USN.
	AN	USN,

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AN , USN.
 AA USN,
 AA USN,
 B-6 1ST LT DSMC.
 AA USN.
 AR USN,
 AR USN.
 HTFA USN,
 LCDR USN,
 ABH3 USN,
 AA , USN
 AOL USN
 ABH1 , USN

63. Fourteen persons died in the crash, explosions and fire. Nine died on the flight deck in the crash and fire and two died as a result of the secondary Sparrow missile explosion. Two of the aircrew died in the crash and one of the aircrew, believed to have died in the crash itself, was lost at sea.

64. :

65. The high percentage of those flight deck personnel killed in the accident found to have used marijuana raises the question of what percentage of flight deck personnel fighting the fire had also used it in the recent past. This cannot be determined; however, the implications of this probability are of great concern with respect to both personnel and ship safety.

66. There is now a relatively simple method of screening urine samples to determine marijuana use. The implications of the apparent large scale use of this drug aboard ship with regard to safety and effective operation make it essential that a readily available screening program for marijuana abusers be implemented as soon as possible.

67. Drug and marijuana use aboard ships in the Navy is a well documented problem. Education, law enforcement and taut discipline must continue. However, past experience has demonstrated that the most effective deterrent to drug use aboard ship is the removal of the drugs from the ship and prevention of their embarkation.

68. Enclosure 57BU shows the best estimate of deceased body locations immediately following the accident. This estimate is based upon known body locations, relationship to aircraft upon which the deceased may have been working at the time, and inferences drawn from other statements. This estimate was made by the investigator.

69. 1st LT Cragun was lost at sea. The condition of the ECMO3 cockpit area (post crash) makes it unlikely that he survived the initial effects of the crash forces and fire. Witnesses observed what appeared to be an ejection seat "cook off" out of the flaming wreckage of 610 and land in the sea off the port side of the ship. The ECMO3 seat was most probably ejected through the horizontal stabilizer of aircraft 111. All other seats in 610, except the ECMO3 seat, were accounted for on the flight deck the following day. No bodies were found in the wreckage of 610. 1st LT Cragun most probably died in the crash itself.

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70. Medical support provided by NRMJ Jacksonville met all requirements by the Ship's Medical Department within an acceptable time frame.

OTHER ITEMS AND CONSIDERATIONS

71. Difficulty was experienced in defining the exact position, relative to time, of the mishap aircraft during the analysis of the accident using the PLAT tape. This difficulty would have been alleviated if the time scale on the PLAT was shown down to the tenths of seconds rather than seconds.

72. Difficulty was experienced in reconstructing the sequence of accident events from photographs taken during the course of the fire. Photographs marked with the time at which taken would have both simplified and improved the investigation process.

73. Both the quality and content of the various shipboard logs was degraded during the accident due to the intensity and rapidity of events. A voice recording device for both bridge conversation and LMC transmissions would have greatly simplified and improved the reconstruction of the sequence and occurrence of events.

RECOMMENDATIONS

1. NIMITZ should make every effort to make the centerline sequenced flasher system operable.
2. NAVAIR should develop a centerline sequence flasher system that is simple and easily maintained. All carriers should be equipped with the system.
- 3.
4. NIMITZ/AIR WING EIGHT review procedures to insure that fuel conservation is practiced in all phases of flight operations.
5. NAVSEA issue PMS changes incorporating weekly run tests of AFFF pumps as soon as possible.
6. NAVSEA investigate the design/reliability of the fuse clips and fuses used in the AFFF pump controllers.
7. NAVSEA review the controller modification recently completed by Norfolk Naval Shipyard when installing "power available" lights on the injection pump controllers.
8. NAVSEA issue specific guidance regarding anti-tampering devices for firefighting system activation controls.
9. NAVSEA provide monitoring in Central Control for the COUNTERMEASURE WASHDOWN/AFFF Systems that has a separate indication for injection pump and two speed pump operations.
10. NIMITZ/Norfolk Naval Shipyard install the remaining cleanout fittings and clean all clogged flush deck nozzles.
11. NIMITZ insure training of all AFFF station operators on methods of securing two speed AFFF injection pump to hose reels without securing salt water flow to hose reels.
12. NIMITZ implement an Emergency AFFF Station Manning Bill that provides qualified station operators on all AFFF stations and a X50J phone talker in Primary.
- 13.
- 14.
15. NAVSEA investigate the feasibility of a centralized storage for AFFF concentrate with provision for transfer to individual station AFFF storage tanks. This provision should be aboard all carriers.
16. NAVSEA in concert with NAVAIRLANT establish adequate allowances of AFFF concentrate for all carriers.
17. NAVSEA provide emergency lighting capability for catwalk areas to facilitate locating firefighting equipment and controls.

18. NAVAIR/NAVSEA install flood lights for emergency illumination of the forward portion of the flight deck. These lights — should be installed on the post supporting the forward range light located forward of aircraft elevator number one. Control would be from the Bridge.

19.

20. NIMITZ establish improved interaction between Air Department and Aircraft Intermediate Maintenance Department in regard to P-16 maintenance.

21. NIMITZ include "nurse" hookup for both MB-5 and P-16 as part of regularly held flight deck fire drills.

22. NIMITZ include the use of new in-line AFFF inductors in flight deck firefighting drills.

23. NAVSEA change vertical two and one-half inch AFFF hose valves in catwalks to eliminate severe bending of hose.

24. NAVSEA install AFFF hose stations in catwalks forward. (SHIPALT 6-81)

25. NAVSEA install "E calls" and X50J handsets at all AFFF hose stations.

26. NAVAIR provide a flight deck communications system to replace the SRC-22/AN-PRC-56 system. This system should be waterproof, comfortable for prolonged use, and multi-channel. A multi-channel system would allow separate channels for aircraft handlers, maintenance personnel and ordnance teams as well as a separate channel for emergency use.

27. NIMITZ install the Digital Voice Protection Radio System.

28. NIMITZ should develop a checklist for use by the OOD showing the immediate actions to be taken for crash/fire on the flight deck. This list should include announcing, "Mass Casualties on the Flight Deck" over the LMC if appropriate.

29.

30. NIMITZ insure that Department Heads review their procedures and instructions for the proper maintenance of logs for which they are responsible.

31. NAVAIR modify PLAT systems on aircraft carriers to include a time readout down to tenths of seconds.

32. NAVAIR provide hand held cameras with the capability of imprinting film with appropriate time reference as to when a picture is taken.

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