AIRCRAFT ACCIDENT
IDENTIFICATION
NO.

5 04 29 101

RECORDS CODE SHEET
SND 4535 (Rev. 1/65)

NAVAL AVIATION SAFETY CENTER

GENERAL (Card No. 1)

Bureau Number	148147	16-21
Reporting Custodian	731	22-24
Type Duty	L	25
Major Command	7	26
Aircraft Damage	A	27
Aircraft Injury	A	28
Time of Day	2	29
Carrier Hull Number	—	30
First Accident type	B4	31-32
First Accident phase	41	33-35
Second Accident type		36-37
Second Accident phase		38-40
Type of Operation	32	41-42
Contributing Cause Factors	Z	43-47
Pilot Factor, First		48-49
Pilot Factor, Second		50-51
Pilot Factor, Third		52-53
First other Personnel Factor		54-55
Second other Personnel Factor		56-57
Primary Major Material Factor	S	58
Secondary Major Material Factor		59
Design		60
Facilities		61
Special Data & Cond.	IHEC	62-65
Special Data & Cond./Type of Incident		66
Primary Cause	Z	67
1st Posit. of Pri. Causal Factor	S	68
1st Possible Cause & Causal Factor	35	69-71
2nd Possible Cause & Causal Factor		72-74
No Personnel Card ("R")		80

SUPPLEMENTARY (Card No. 2)

Weather		16-21
Kind of Flight	1K	22-24
Relative Wind - Direction	—	25
Relative Wind - Velocity	—	26
Special Attention	—	27
Clearance	2	28
Maneuver prior to Occurrence	N	29
Number of other Aircraft	—	30
Primary Causal Factor	S	31-32
Altitude of Occurrence or Emergency		33-35
Environmental Factors		38-40
Non-Navy Injury ("R")		42
Number of "A" or "U" Injury	02	43-44
Number of "B" Injury		46-47
Number of "C" Injury		48-49
Number of "D" Injury		50-51
Number of "E" Injury		52-53
Number of "F" Injury		54-55
Number of "G" Injury		56-57
Location	AMASS	62-68

ACCIDENT DAMAGE A (9)

ACCIDENT INJURY A (10)

FISCAL YEAR 5 (75)

Don't Count R | Enemy Action | Other Aircraft

I. D. NO. 5 (1) YR 04 (2-3) MO 29 (4-5) DAY 01 (6-7) TYP SEQ

— C 2 A (11-15) Model

Model Code 97 (76-77)

PERSONNEL STATISTICS (Card No. 3)

File Number → (b) (6) [redacted]

Name	16	17	18	19	20	21	Rank/Rate	Br Service	Age	Yrs Experience	Status	Position	Inj to Ind	Abandon A/C	Pilot Factor Involved	Trainer Utilization	Instr. Card	Total Time All Models	All Models 3 Months	All Series This Model	All Ser Mod 3 Months	CV Landings	Instrument Hours	Nite Hours	Total Time Jet or Hole
03 MCLEOD				M		M	2	1	L	A	A	1	A	1	2	00	3	33	05	00	00	B	15	03	
04 EADES			T		A		3	1	B	6	C	2	A	1	4	00	3	22	07	01	00				

Name 16 17 18 19 20 21

File Number → (b) (6) [redacted]

IBM: PERSONNEL CODED ON REVERSE SIDE ☐

CLOSED
9 DEC 1965

CODED [illegible] REVIEWED ____ LOGGED [illegible] PUNCHED ____ VERIFIED ____

CODE SHEET REVIEWED BY CLASS DESK ANALYST ____ (Initials) ____ (Date)

06-15-65

MAINTENANCE AND MATERIAL CODE SHEET (Narrative brief on reverse)

SND 4621 (Rev. 10/64)

MAINTENANCE AND MATERIAL CARD NUMBER 33		CARD COL.
PRIMARY INVOLVED MATERIAL COMPONENT		16-21
SECONDARY INVOLVED MATERIAL COMPONENT		24-29
PROBABLE INVOLVED MATERIAL COMPONENT	S99997	32-37
SPECIAL DATA AND CONDITIONS acc, range 5'	I29	40-42
SPECIAL DATA AND CONDITIONS long	551	44-46
SPECIAL DATA AND CONDITIONS long	541	48-50
SPECIAL DATA AND CONDITIONS		52-54
SPECIAL DATA AND CONDITIONS		56-58
SPECIAL DATA AND CONDITIONS		61-63
SPECIAL DATA AND CONDITIONS		65-68
FIRST MAINT FLT/SPEC COMPONENT		
CARD NUMBER	33	79-80

MAINTENANCE AND MATERIAL CARD NUMBER 34		CARD COL.
PRIMARY INVOLVED MATERIAL COMPONENT:		
MFG P/N		16-31
TOTAL HOURS		34-37
OVERHAUL ACTIVITY		39
NUMBER OF OVERHAULS		41
HOURS SINCE OVERHAUL		43-46
AIRCRAFT TOUR	1	48
AIRCRAFT FLIGHT HOURS SINCE ACCEPTANCE	6	50
AIRCRAFT FLIGHT HOURS SINCE LAST INSPECTION	54	53-55
DAYS SINCE LAST AIRCRAFT INSPECTION	36	57-59
TYPE LAST AIRCRAFT INSPECTION		61
MONTHS SINCE PAR/OVERHAUL		67-68
CARD NUMBER	34	79-80

MAINTENANCE AND MATERIAL CARD NUMBER 35		CARD COL.
PROBABLE OR SECONDARY INVOLVED MATERIAL COMPONENT:		
MFG P/N		16-31
TOTAL HOURS		34-37
OVERHAUL ACTIVITY		39
NUMBER OF OVERHAULS		41
HOURS SINCE OVERHAUL		43-46
POWER PLANT MODEL NUMBER	T56A8	49-56
POWER PLANT SERIAL NUMBER	AE1Ø2Ø58	58-64
DIR		68
CARD NUMBER	35	79-80

CAUSE FACTORS: Z
COMPONENT NO. 1
COMPONENT NO. 2
DESIGN

POSSIBLE CAUSE FACTORS: 3
COMPONENT: S
DESIGN

ACCIDENT DAMAGE 9
ACCIDENT INJURY 10

Quan'y Count: 3 | Enemy Action | Other Aircraft

I.D. NO.: 5 (YR) 04 (MO) 29 (DAY) 1 (TYP) 6 (SEQ)

Model: 8 3 A

SPECIAL ATTN ("X")

Model Code: 8 Z

REPORT NUMBER

CUSTODIAN

IDENT. NUMBER

FOR H&M FILING ONLY: MODEL | BUNO | DATE

FOR IBM: 30 JUN 1965 (A)

PUNCHED	VERIFIED
PUNCHED	VERIFIED

MAN-CODING RECORD

DATE CODED	CODED BY	LOGGED
30 Jun 65	(b) (6) [redacted]	

(b) (6) [redacted]

AFTER 1.1 HRS OF
EVAL FLT PLT REPORTED BOTH ENGS INOP, XMSSN FADED. TR
AFTER EXTENDED SEARCH BODIES OF BOTH PLTS RECOVERED.
MOR STATES EXPOSURE WAS CAUSE OF DEATH. ACFT NOT RE-
COVERED. FLT PLAN INCLUDED SINGLE ENG OP FOR STAB
TEST. CAUSE OF CRASH UNDET, POSS FAILURE OF #2 ENG
WHILE #1 WAS FTHR.

CARD NO. 79 80

3 6
3 7
3 8
3 9
4 0
4 1
4 2
4 3
4 4
4 5
4 6
4 7
4 8
4 9
5 0
5 1
5 2
5 3
5 4
5 5
5 6
5 7
5 8
5 9

SND 4621 (Rev. 10/64) (Back)

U. S. NAVAL AVIATION SAFETY CENTER
U. S. NAVAL AIR STATION
NORFOLK, VIRGINIA 23511

NASC/dy
Ser 17/ 1873
8 December 1965

SPECIAL HANDLING REQUIRED IAW OPNAVINST 3750.6 SERIES

From: Commander, U. S. Naval Aviation Safety Center
To: Bureau of Naval Weapons Representative, Bethpage, L.I., New York

Subj: BUWEPSREP BETHPAGE AAR ser 1-65A concerning C-2A BuNo 148147 accident occurring 29 April 1965, pilot McLEOD

Ref: (a) OPNAVINST 3750.6E

1. The subject report and all endorsements thereon have been reviewed. The Naval Aviation Safety Center concurs with the comments and recommendations of the Aircraft Accident Board as modified by subsequent endorsers subject to the following remarks.

2. Commander, U. S. Naval Aviation Safety Center does not concur in downgrading the subject report as requested in paragraph 3 of the third endorsement. The provisions of section A, sub-paragraph 1a of reference (a) are considered to apply.

3. Although the fact that the flight was conducted outside gliding distance of land is not a contributing factor to the mishap, failure of the pilots to exercise reasonable prudence in selection of the test area and failure of supervisory authority to brief on required geographic limits of the test area are important factors in the permanent loss of the airframe and failure of the pilots involved to survive.

4. It is noted that administrative error was committed in that Allison Division, General Motors Corporation was included as an information addressee while the U. S. Naval Aerospace Recovery Facility, El Centro, California, was omitted. The Bureau of Naval Weapons Representative, Bethpage, is accordingly requested to provide one copy of the AAR together with all endorsements to the NAVAERORECOVFAC and to recquire copies and endorsements submitted to Allison Division, General Motors Corporation.

CLOSED

NASC/dy
Ser 17/1873
8 December 1965

SPECIAL HANDLING REQUIRED IAW OPNAVINST 3750.6 SERIES

5. The cause of this accident has been recorded by the Center as UNDETERMINED with MATERIAL FAILURE/MALFUNCTION (power plant) as the most probable contributing factor.

Paul D. Buie

PAUL D. BUIE

Copy to:
BUWEPS (FSA) (2)
COMNAVAIRTESTCEN
CO NAVAERORECOVFAC

NWSA
FSA-31:JRM
4 November 1965

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 66, OPNAVINST P3750.6E

THIRD ENDORSEMENT on AAR, BWR, Bethpage serial 1-65A, 29 April 1965, C-2A, BUNO 148417, pilot McLEOD

From: Chief, Bureau of Naval Weapons
To: Commander, U. S. Naval Aviation Safety Center

Subj: Aircraft Accident

Ref: (a) BUAER ltr AER-MA-365/22 of 12 April 1965
(b) OPNAVINST P3750.6E

1. Forwarded, concurring in the conclusions and recommendations of the Board as modified by subsequent endorsements, subject to the following Comments

2. It is the intent of the Bureau and the Aviation Supply Office that survival kits delivered to contractors for installation in new aircraft be complete in all respects. Reference (a), which contained a deviation from this policy, is considered cancelled. ASO is currently reviewing their procedures and will insure that such kits are in fact complete.

3. It is requested that the Naval Aviation Safety Center downgrade this accident to an incident in accordance with Paragraph 9b of reference (b).

4. The following administrative errors are noted:

a. The aircraft accident report is not numbered in accordance with instructions contained in Paragraph 44 of reference (b).

b. The report is not in a 9"x14 3/4" folder as required by Paragraph 46 of reference (b).

c. The First Endorsement is not marked as required by Paragraph 70c of reference (b).

d. The First Endorsement does not show copy distribution as required by Paragraph 48i of reference (b).

A. T. PIMENTEL, JR.
By direction

Copy to:
NATC PAX RIVER
BUWEPSREP BETHPAGE

C-2A
CT01-289
JUN 10 1965

SECOND ENDORSEMENT on AAR, BWR, Bethpage serial 1-65A, 29 Apr 1965, C-2A, BuNo 148417, Pilot McLEOD

From: Commander, Naval Air Test Center, Patuxent River, Maryland
To: Commander, U. S. Naval Aviation Safety Center, Norfolk, Virginia
Via: Chief, Bureau of Naval Weapons

Subj: BUWEPSREP, Bethpage, Aircraft Accident Report 1-65A; forwarding of

1. Forwarded, concurring in the conclusions and recommendations of the board and the comments in the first endorsement.

2. This command is appalled by the callous manner in which the pilots' bodies were handled during their transfer from the Coast Guard cutter VIGILANT to the Naval Hospital, Newport, Rhode Island, as described in enclosures to the Medical Officer's Report. This matter will be the subject of separate correspondence to the commands concerned.

James R. Lee
JAMES R. LEE

Copy to:
BWR, Bethpage
NAVAVNSAFECEN, NorVa
Allison Div., GM, Indianapolis
BUWEPSFLTREADREPLANT

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OF OPNAVINST P3750.6E

A:ag
3750
26 MAY 1965

FIRST ENDORSEMENT on AAR, BWR, Bethpage serial 1-65A, 29 April 1965, C-2A BUNO 148417, Pilot McLeod

From: Bureau of Naval Weapons Representative, Bethpage
To: Commander, Naval Aviation Safety Center
Via: (1) Commander, Naval Air Test Center, Patuxent River
(2) Chief, Bureau of Naval Weapons

1. Forwarded, concurring with the conclusions and recommendations of the Board as modified below:

Recommendation 1. - The Contractor has instituted procedures to provide complete kits in bailed and new production aircraft which will be identical. In addition, a commercial pilot locator beacon, attachable to the life jacket, will be available for each crew member. Kits will be removed when aircraft are declared ready for issue and replaced by GFE kits which will be short certain items listed in BUWEPS letter AER-MA-365/22 of 12 April 1956.

Recommendation 2. - Initial flights during experimental or developmental tests involving single engine operation will be monitored by chase aircraft. Subsequent flights, including production test flights involving single engine operations will be monitored by radar tracking.

Recommendation 3. - Concur that flight surgeons should continue an agressive program in this regard, however, Command responsibility for enforcing or augmenting requirements of OPNAVINST P3710.7B cannot be avoided. For example, it now appears prudent to require continuous wear anti-exposure suits vice the carriage of quick donning exposure suits for all test flights in C2 aircraft. This requirement will be imposed locally when low water temperature prevails.

Recommendation 4. - Concur.

2. Search operations under COMSERVLANT direction discontinued at sunset, 21 May in accordance with COMSERVLANT message 202139Z. USS Manning will continue search 25 thru 28 May under direction of ONR.

H. E. VIEN

ORIGINAL

AIRCRAFT ACCIDENT REPORT
OPNAV FORM 3750-1 (Rev. 3-63) Page 1

SPECIAL HANDLING REQUIRED in accordance Para. 56, OPNAV INSTRUCTION 3750.6, e[illegible]ive edition

OPNAV REPORT 3750-1

PART I GENERAL

SECTION A. IDENTIFICATION

1. AIRCRAFT ACCIDENT BOARD APPOINTED BY: BuWeps Rep. Bethpage, N. Y.	2. SERIAL NO.: 1-65A	3. DTG (LOCAL) OF MISHAP: 291726Q Apr.	4. MODEL AIRCRAFT: C-2A	5. BUREAU NUMBER: 148147
6. TO: Commander, Naval Aviation Safety Center		9. LOCATION OF MISHAP: Vicinity Cuttyhunk I. Mass.		10. DAMAGE: Alfa
7. VIA: BuWepsRep, Bethpage, N. Y. Commander, Naval Air Test Center Chief, Bureau of Naval Weapons	8. P	11. TIME OF DAY: Day	12. TIME IN FLIGHT: 1+08	13. FLIGHT CODE: 1 K
		14. CLEARED FROM: Grumman Peconic River Airport TO: Grumman Peconic Riv Apt		
		15. TYPE CLEARANCE: VFR	16. AIRSPEED: E 120 Kts.	17. A/C WEIGHT: 47,500
18. BRIEF DESCRIPTION OF MISHAP: Both Engines INOP - Collision with water.			19. ELEVATION AT TIME OF MISHAP: Sea Level TERRAIN	

20. LIST MODEL, BUNO, REPORTING CUSTODIAN AND DAMAGE CLASSIFICATION OF ANY OTHER A/C INVOLVED (Complete OPNAV Form 3750-1 for each A/C)

N/A

SECTION B. CONTRIBUTING FACTORS

*	✓	FACTOR	✓	FACTOR	✓	FACTOR
		1. PILOT ERROR IN TECHNIQUE/JUDGMENT		9. SERVICING PERSONNEL		17. WEATHER
		2. PILOT DEVIATION FROM NATOPS PROCEDURES		10. LANDING SIGNAL OFFICER		18. DESIGN AIRCRAFT
		3. PILOT INCORRECT OPERATION OF A/C SYSTEM		11. OTHER PERSONNEL (Specify)		19. DESIGN CREW EQUIPMENT
		4. PILOT OTHER (Specify)		12. ADMINISTRATIVE		20. DESIGN OTHER (Specify)
		5. CREW		13. FACILITIES-RUNWAY, OVERRUN TAXIWAY, FLIGHT DECK		21. ROLLING/PITCHING DECK ROUGH SEAS
		6. MAINTENANCE PERSONNEL		14. FACILITIES-NAV AIDS, LANDING AIDS (GCA, CCA, ILS, MIRROR)		22. MATERIAL FAILURE/MALFUNCTION
		7. MAINTENANCE SUPERVISORY PERSONNEL		15. FACILITIES-CATAPULT, ARRESTING GEAR (Ship or field)	X	23. UNDETERMINED
		8. SUPERVISORY OTHER (Specify)		16. FACILITIES OTHER (Specify)		24. OTHER (Specify)

SECTION C. PERSONNEL DATA

1. NAME (LAST, FIRST, & MIDDLE INITIAL)	2. RANK/RATE	3. SERVICE NO.	4. SERVICE NATION	5. BRANCH OF SERVICE	6. AGE	7. TIME IN SERVICE	8. BILLET	9. POSITION	10. [illegible]
PILOT (AT CONTROLS AT TIME OF MISHAP) McLeod Murdock M.	Cdr.	(b) (6) [redacted] 1310		USN	40	24yr 6 mo	Pilot	Cockpit Lft/st.	A
CO-PILOT (IDENTIFY & SUBMIT SEPARATE PAGE 1) Endes Thomas A.	LCdr.	[redacted] 1310		USN	30	6yr 4mo	CoPilot	Cockpit Rt/st.	A

PILOT EXPERIENCE IN HOURS

ITEM			ITEM		
11. ALL MODELS		3342	17. CV LANDINGS DAY/NIGHT	ALL	260 / 0
				IN MODEL	0 / 0
12. ALL MODELS IN LAST 12 MONTHS		244	18. FCLP LANDINGS LAST 6 MONTHS DAY/NIGHT	ALL	393 / 0
				IN MODEL	0 / 0
13. ALL MODELS IN LAST 3 MONTHS		56	19. INSTRUMENT HOURS LAST 3 MONTHS ACTUAL/SIMULATED	ALL	14.6 / 0
				IN MODEL	0 / 0
14. ALL SERIES THIS MODEL	A/C	9	20. NIGHT HOURS LAST 3 MONTHS	ALL	3
	OFT/CPT	0 / 0		IN MODEL	0
15. ALL SERIES THIS MODEL LAST 12 MONTHS	A/C	9	21. TOTAL HOURS IN JETS (if jet mishap) HELOS (if helo mishap)		N/A N/A
	OFT/CPT	0 / 0			
16. ALL SERIES THIS MODEL LAST 3 MONTHS	A/C	9	22. LAST PRIOR FLIGHT ALL SERIES THIS MODEL	DATE	28 Apr 1965
	OFT/CPT	0 / 0		DURATION	1.4
23. DATE/GRADE LAST NATOPS STANDARDIZATION CHECK		N/A	24. TYPE INSTRUMENT CARD		Special

OTHER PERS.

*	25. NAME (LAST, FIRST, & MIDDLE INITIAL)	26. DNA	27. RANK/RATE	28. BRANCH OF SERVICE	29. FILE/SERVICE NO.	30. UNIT	31. INJURY	32. BILLET	33. POSITION

ORIGINAL

ORIGINAL

AIRCRAFT ACCIDENT REPORT
OPNAV FORM 3750-1 (Rev. 3-63) Page 1

SPECIAL HANDLING REQUIRED in accordance Para. 66, OPNAV INSTRUCTION 3750.6, [illegible] active edition

OPNAV REPORT 3750-1

PART I GENERAL

SECTION A. IDENTIFICATION

1. AIRCRAFT ACCIDENT BOARD APPOINTED BY
2. SERIAL NO.
3. DTG (LOCAL) OF MISHAP
4. MODEL AIRCRAFT
5. BUREAU NUMBER
6. TO: Commander, Naval Aviation Safety Center
7. VIA:
8.
9. LOCATION OF MISHAP
10. DAMAGE
11. TIME OF DAY
12. TIME IN FLIGHT
13. FLIGHT CODE
14. CLEARED FROM: TO:
15. TYPE CLEARANCE
16. AIRSPEED
17. A/C WEIGHT
18. BRIEF DESCRIPTION OF MISHAP
19. ELEVATION AT TIME OF MISHAP S.L. TERRAIN
20. LIST MODEL, BUNO, REPORTING CUSTODIAN AND DAMAGE CLASSIFICATION OF ANY OTHER A/C INVOLVED (Complete OPNAV Form 3750-2 for each A/C)

SECTION B. CONTRIBUTING FACTORS

✓	FACTOR	✓	FACTOR	✓	FACTOR
	1. PILOT ERROR IN TECHNIQUE/JUDGMENT		9. SERVICING PERSONNEL		17. WEATHER
	2. PILOT DEVIATION FROM NATOPS PROCEDURES		10. LANDING SIGNAL OFFICER		18. DESIGN AIRCRAFT
	3. PILOT INCORRECT OPERATION OF A/C SYSTEM		11. OTHER PERSONNEL (Specify)		19. DESIGN CREW EQUIPMENT
	4. PILOT OTHER (Specify)		12. ADMINISTRATIVE		20. DESIGN OTHER (Specify)
	5. CREW		13. FACILITIES-RUNWAY, OVERRUN TAXIWAY, FLIGHT DECK		21. ROLLING/PITCHING DECK ROUGH SEAS
	6. MAINTENANCE PERSONNEL		14. FACILITIES-NAV AIDS, LANDING AIDS (GCA, CCA, ILS, MIRROR)		22. MATERIAL FAILURE/MALFUNCTION
	7. MAINTENANCE SUPERVISORY PERSONNEL		15. FACILITIES-CATAPULT, ARRESTING GEAR (Ship or field)		23. UNDETERMINED
	8. SUPERVISORY OTHER (Specify)		16. FACILITIES OTHER (Specify)		24. OTHER (Specify)

SECTION C. PERSONNEL DATA

1. NAME (LAST, FIRST, & MIDDLE INITIAL)	2. RANK	3. PILOT SERIAL NO.	4. DESIG. NATOR	5. BRANCH OF SERVICE	6. AGE	7. [illegible]	8. BILLET	9. POSITION	10. [illegible]
PILOT (AT CONTROLS AT TIME OF MISHAP)									
CO-PILOT (IDENTIFY & SUBMIT SEPARATE PAGE 1) Enden Thomas A.	LCdr.	(b) (6) [redacted]	1310	USN	30	6yr 1 mo	CoPilot	Cockpit Rt/st.	A

PILOT EXPERIENCE IN HOURS

ITEM			ITEM		
11. ALL MODELS		2263	17. CV LANDINGS DAY/NIGHT	ALL	22 / 10
12. ALL MODELS IN LAST 12 MONTHS		322		IN MODEL	0 / 0
13. ALL MODELS IN LAST 3 MONTHS		79	18. FCLP LANDINGS LAST 6 MONTHS DAY/NIGHT	ALL	0 / 0
14. (E-2A/C-2A) ALL SERIES THIS MODEL	A/C	11.2		IN MODEL	0 / 0
	OFT/CPT	0 / 0	19. INSTRUMENT HOURS LAST 3 MONTHS ACTUAL/SIMULATED	ALL	7 / 12
15. (E-2A/C-2A) ALL SERIES THIS MODEL LAST 12 MONTHS	A/C	11.2		IN MODEL	0 / 0
	OFT/CPT	0 / 0	20. NIGHT HOURS LAST 3 MONTHS	ALL	9
16. ALL SERIES THIS MODEL LAST 3 MONTHS	A/C	3.1		IN MODEL	0
	OFT/CPT	0 / 0	21. TOTAL HOURS IN JETS (if jet mishap) HELOS (if helo mishap)		
22. DATE/GRADE LAST NATOPS STANDARDIZATION CHECK		N/A	23. LAST PRIOR FLIGHT ALL SERIES THIS MODEL	DATE	29 Apr. 65
				DURATION	3.1
			24. TYPE INSTRUMENT CARD		Special

OTHER PERS.

25. NAME (LAST, FIRST, & MIDDLE INITIAL)	26. DNA	27. [illegible] RATE	28. MONTH OF SERVICE	29. FILE/SERVICE NO.	30. UNIT	31. [illegible]	32. BILLET	33. POSITION

11A-0107-601-6903

ORIGINAL

NAVPERS 10-11865

ORIGINAL

AIRCRAFT ACCIDENT REPORT
OPNAV FORM 3750-1 (Rev. 3-63) Page 2

SPECIAL HANDLING REQUIRED in accordance with
—Para. 66, OPNAV INSTRUCTION 3750.6, effective edition

OPNAV REPORT 3750-1

PART II MAINTENANCE, MATERIAL, AND FACILITIES DATA

A. A/C HISTORY

1. DATE OF MANUFACTURE	2. FLIGHT HRS. SINCE ACCEPTANCE	3. NO. OF PAR/OVERHAUL	4. MONTHS SINCE LAST PAR/OVERHAUL	5. FLT. HRS SINCE LAST PAR/OVERHAUL	6. LAST PAR OVERHAUL ACTIVITY	7. TYPE OF LAST CHECK PERFORMED	8. FLIGHT HOURS SINCE LAST CHECK	9. DAYS SINCE LAST CHECK
11/30/64	117.5	0	N/A	N/A	N/A	4 wk. check	54.1	36

B. ENGINE HISTORY

1. ENGINE MODEL	2. ENGINE SERIAL NUMBER	3. FLIGHT HRS. SINCE ACCEPTANCE	4. NUMBER OF OVERHAULS	5. WAS DIR. REQUESTED?	6. FLT. HRS. SINCE LAST OVERHAUL	7. LAST OVERHAUL ACTIVITY	8. TYPE OF LAST CHECK PERFORMED	9. FLIGHT HOURS SINCE LAST CHECK	10. DAYS SINCE LAST CHECK
(1) T56-A8	AE 102050	* 387.2	None	N/A	None	DNA	75 Hour Special	40.8	23
(2) T56-A8	AE 102058	* 386.8	None	N/A	None	DNA	75 Hour Special	40.4	23
(3)									
(4)									

* Engines were used on E-2A BuNo 148147 before conversion to C-2A

C. COMPONENT HISTORY

1. COMPONENT INVOLVED NOMENCLATURE	2. MANUFACTURERS PART NUMBER	3. TOTAL HRS. ON PART	4. NO. OF OVER-HAULS	5. HOURS SINCE LAST OVERHAUL	6. OVERHAUL ACTIVITY	7. WAS DIR. REQUESTED?	8. SER. NO. FUR/AMPFUR
(1)							
(2)							
(3)							
(4)							

D. INCIDENTS & GROUND ACCIDENTS

1. PARTS REPAIRED		3. DIRECT MANHOURS INVOLVED	2. PARTS REPLACED	
PART NUMBER	NOMENCLATURE		PART NUMBER	NOMENCLATURE

E. ENGINE FAILURES

JET ENGINE FLAMEOUT (Include intentional securing to prevent engine damage)

AT TIME OF FLAMEOUT	1. ALTITUDE	2. IAS	3. RPM	4. EGT.	5. MANEUVER AT TIME OF FLAMEOUT	6. FUEL FLOW	7. ATTITUDE

8. G FORCES	9. RELIGHT ☐ ATTEMPTED ☐ ACCOMPLISHED	10. ALTITUDE	11. IAS	12. MAX EGT	13. FUEL CONTROL ☐ PRIMARY ☐ MANUAL	14. NO. RELIGHT ATTEMPTS

INTENTIONAL SECURE	15. ENGINE SYMPTOMS	16. CAUSE OF SYMPTOMS

RECIPROCATING ENGINE FAILURE

17. ALTITUDE	18. IAS	19. ATTITUDE	20. RPM	21. MAP	22. TORQUE/SHEP	23. FUEL FLOW PRESSURE	24. OIL PRESSURE

INTENTIONAL SECURE	25. ENGINE SYMPTOMS	26. CAUSE OF SYMPTOMS

F. OTHER REPORT

IDENTIFY OTHER REPORTS CONCERNING THIS MISHAP

1. AMPFUR SERIAL NUMBER _____
2. DIR MESSAGE REQUEST DATE-TIME-GROUP _____. Info NASC on DIR request. See para. 38 OPNAVINST P3750.6E
3. OTHER
4.

ORIGINAL

SP-55F

ORIGINAL

AIRCRAFT ACCIDENT REPORT
OPNAV FORM 3750-1 (Rev. 3-63) Page 3

SPECIAL HANDLING REQUIRED in accordance with Para. 66, OPNAV INSTRUCTION 3750.6, active edition

OPNAV REPORT 3750-1

1. EQUIPMENT INVOLVED ☐ CATAPULT ☐ ARRESTING GEAR	2. PRESSURE SETTING	3. WIND OVER DECK	4. RELATIVE WIND	5. APPROACH/ING SPEED

6. MARK NUMBER	7. MODEL NUMBER	8. LOCATION ON SHIP	9. LAUNCHING BRIDLE AND BRIDLE ARRESTER

10. CATAPULT/ARRESTING GEAR BULLETINS OR NOMOGRAMS USED

G. SHIPS DATA

11. This portion shall be completed whenever (1) an aircraft accident involves arresting gear barrier and/or barricade equipment, or (2) an aircraft accident involves malfunctioning of arresting gear, barrier and/or barricade equipment. Incidents or routine damage to cables, weldings and other expendable equipment need not be reported herein.

ENGAGED	12. DECK RUNOUT (FEET)	13. RAM TRAVEL (INCHES)	14. CONTROL VALVE SETTINGS: CONSTANT PRESSURE: DOME (P.S.I.)	CONSTANT PRESSURE: RATIO	CONSTANT RUN-OUT (WT. LBS.)	15. ACCUMULATOR PRESSURE (PSI)	16. COMMENTS (for cable failures specify no. landings and months in service)
DECK PENDANT							
DECK PENDANT							
BARRIER/BARRICADE							

H. DEPLOYMENT

FOR ACCIDENTS ABOARD CARRIERS (Complete on pilot)

1. DATE DEPLOYED CONUS	3. DAY HOURS/LANDINGS SINCE DEPLOYMENT	4. DAY HOURS/LANDING LAST 30 DAYS
2. NO. DAYS OPERATING PERIOD		
5. INST. HOURS LOGGED SINCE DEPLOYMENT ACTUAL/SIMULATED	6. NIGHT HOURS/LANDINGS SINCE DEPLOYMENT	7. NIGHT HOURS/LANDINGS LAST 30 DAYS

I. WEATHER

WEATHER AT SCENE OF MISHAP

1. CEILING	2. VISIBILITY	3. RELATIVE WIND DIRECTION AND VELOCITY	4. TEMPERATURE RUNWAY / OUTSIDE AIR	5. DEW POINT	6. ALTIMETER SETTING
Unlimited	15+	190/10	67	49	29.87

7. OTHER WEATHER CONDITIONS (Winds aloft, icing level, sea state, density altitude, as appropriate)

Sea State - Slight (Water temperature 42° F. (estimated)

PART III. ADDITIONAL INFORMATION

PART	SECTION	ITEM	1. REMARKS

2. COPY DISTRIBUTION

2 CC NAVAVNSAFECN DIRECT (AAR)
1 CC BUNEPS DIRECT (AAR)
1CC AEPR Allison Div General Motors, Indianapolis
1 CC BUWEPSELTREADREP, LANT

COST DAMAGE TO:	3. GOVERNMENT PROPERTY	4. PRIVATE PROPERTY	5. DATE SUBMITTED TO CO
	None	None	

(b) (6)

[redacted]

* When preparing Incident and Ground Accident reports, items indicated by an asterisk in the upper right hand corner must be filled in. Other items considered appropriate should also be filled in.

OP-05F

ORIGINAL

V THE ACCIDENT

Cdr. McLeod and LCdr. Eades were scheduled on a properly authorized evaluation test flight of C-2A BuNo 148147 as a part of the Phase I Navy Preliminary Evaluation (hereinafter referred to as NPE). The pilot, Cdr. McLeod, had been assigned a permanent number to use as a radio call sign on all NPE flights - in this case "Grumman Flight 94". Flight 94 departed the Grumman Peconic River Airport, Calverton, NY at 1618Q on Thursday, 29 April 1965.

The purpose of the flight was to perform a series of stability and control tests in various aircraft configurations. Both pilots had been thoroughly briefed and furnished with a set of test cards with all details of each test.

Flight 94 made two routine position reports to Peconic Tower. The first was at 1642Q at a position one mile North of the center of Block Island. The second was at 1709Q at a position three miles North of Montauk Point.

At 1726Q Flight 94 reported that he had lost both engines, that he had turned on Emergency IFF, that he was on the 090 radial (assumed to be of the Riverhead Vortac Station), that he was off Montauk, and that he could see two very small islands. The latter part of the transmission (reporting the islands) was very weak and garbled.

Extensive air and sea search and rescue efforts were immediately initiated and were terminated only on recovery of the bodies of both crewmen shortly after noon on Saturday 1 May in the vicinity of Cuttyhunk Island, Mass. Also recovered in the course of the search in the same general area were the pilot's seat pan and life raft case on Friday, 30 April, the co-pilot's seat pan with raft intact on Saturday, 1 May, and a small piece of the cabin overhead upholstery on Saturday, 1 May. The position of recovery of the seat pan and life raft case two miles SSE of Cuttyhunk Island is only approximate since they were recovered by a fishing boat and were sometime later transferred to a Coast Guard helicopter.

VI DAMAGE TO AIRCRAFT

Aircraft damage is Alfa, as a result of prolonged immersion in salt water. If further search efforts locate the wreckage, a supplementary report will be made to this AAR, which will include amplification of the damage suffered by the aircraft upon impact with the water.

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

VII THE INVESTIGATION AND ANALYSIS

a. General This aircraft was the first of its type, and only a few contractor-prepared handbooks and other descriptive material are available. For a description of the basic aircraft systems such as power plants, flight controls, electrical system, and fuel system, publications defining the E-2A aircraft may be consulted since they are essentially identical. Additionally, the somewhat unusual history of C-2A BuNo 148147 is attached as enclosure (1).

Due to the fact that there were no survivors, no witnesses, and the wreckage is not yet located, very little exact information has been obtained.

The statements of Mr. (b) (6) enclosure (2), Mr. (b) (6) enclosure (3) and LT (b) (6) enclosure (4), show the very extensive planning and briefing that went into this flight. This is, of course, characteristic of all NPE flights where as much as possible must be learned in a very limited amount of flight time. A very rigid program of this nature does provide the unique advantage of being able to make a reasonable estimate of what was probably occurring just prior to the emergency. Drawing upon the experience of the NPE team in performing similar tests, an estimate of time required for each test series was made, and an Estimated Chronology of Events, enclosure (5), was prepared. The time estimates were originally prepared without reference to the two position reports which upon later comparison seem to corroborate the estimates since it is believed to be more likely to make position reports on a flight such as this upon completion of one test card before commencing the next. Also, the 17090 position report included the brief statement "simulating single engine". If the estimated chronology is accurate, Flight 94 would have been performing tests for Directional Control With Assymmetric Power in take-off configuration at approximately 5,000 feet altitude just prior to reporting the emergency. The accident therefore, was precipitated by either;

1) failure of the #2 engine from unknown causes while the #1 engine was intentionally secured for test purposes. In this condition there is no way to unfeather and airstart the secured good engine; or
2) failure of both engines from unknown causes.

In consideration of (1) above, a previously reported discrepancy could have been a contributing factor. The aircraft was lost on its 81 st flight. On the 46th flight on 17 March the left propeller could not be unfeathered due to loss of the right generator. On its 47th flight, also on 17 March, the right generator cut out while unfeathering the left propeller. On the 49th flight, on 25 March, the pilot reported that the left engine unfeather circuit was still intermittent. If the

(b) (5)

[redacted]

The evidence contained in the Medical Officer's Report, enclosure (6), indicates that the ditching following engine failure was successfully accomplished and that both pilots evacuated the sinking aircraft, taking with them at least one pararaft kit. It is further believed to be highly probable that Cdr. McLeod inflated the raft, entered it, and supported LCdr. Eades alongside for some period of time. The flight controls of the C-2A are actuated solely by hydraulic pressure. Hydraulic power supplied by one windmilling engine (worst condition) is supposed to be adequate to maintain control of the aircraft. The evidence contained in the MOR apparently eliminates loss of control as a factor.

b. Personnel Factors

1) Pilot Factors There are no known or suspected pilot factors that would have contributed to the cause of the accident. There are, however, pilot factors that may have contributed to failure of the search and rescue effort.

a. Position Reporting What is now presumed to be the most probable location of the ditching was not presumed to be so during the two or three critical hours immediately following the accident. While the probable location of the ditching was included in the initial search area, it was not the center of the most concentrated effort. Immediately following the accident the best information available was the 1709Q position report three miles North of Montauk, and 17 minutes later, in the last transmission, on about the 090 radial off Montauk. With regard to the 1709Q position, some members of the board now believe that the aircraft was actually in the vicinity of Block Island rather than Montauk Point. A tape recorded radar track of an unidentified aircraft, made by the SAGE site at McGuire AFB, New Jersey (based on raw radar input from the remote site at Montauk Point), has become available and is shown on the charts, enclosure (7), depicting the other important locations and items pertinent to this accident. (b) (5)

(b) (5)

(b) (5)

[redacted] LCdr. Eades was making all radio transmissions. This was only his second flight in the area, making any high degree of familiarity with the area unlikely. From this position, with the aircraft on an easterly heading, LCdr. Eades' viewpoint from the co-pilots seat would have given him little information

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from which to accurately gauge his position. In addition, the left curvature of the track might well be accounted for by the series of left engine throttle chops during the dynamic buildup tests at 10,000 feet altitude. The fadeout of the track also correlates well with the Estimated Chronology of Events, which shows a descent from 10,000 to 5,000 feet. (b) (5) [redacted] (b) (5) As for the final transmission, the significance of two very small islands was largely lost due to a very week, garbled and fading transmission. It was not until after the bodies and debris had been recovered on 1 May that any sense could be made of the almost incoherent final transmission. Only after several hundred playbacks of the tower tape recording could an understanding of the last portion of the transmission be reached. Adding to Flight 94's difficulties in accurate position reporting was the inoperative DME function of the TACAN equipment. It had been reported as inoperative on the two previous flights the same day, but corrective action was postponed as it was not considered to be a downing discrepancy.

b. Selection of Test Area It seems apparent that up to the time of the accident the flight had been conducted largely over water, generally between Martha's Vineyard and Montauk Point. More careful consideration of water temperature (42-47), the fact that antiexposure suits were not being worn (quick donning antiexposure suits were aboard the aircraft), and the intention to become effectively a single engine aircraft by securing one engine for test purposes, should have more prudently kept the aircraft within gliding distance of land.

2) Supervisory/Other Personnel Factors At the Grumman Peconic River facility there are basically two kinds of Navy owned aircraft. One group is that which is bailed (or loaned) to the Contractor for use in RDT&E projects (the C-2A was one of these). The other group is comprised of those newly completed aircraft undergoing production and Navy acceptance flight testing in preparation for fleet delivery. The Navy furnishes the Contractor with PK2 pararaft kits for both types of aircraft. Some of the items normally contained in the survival equipment section of the kit are subject to pilferage, others require special handling in shipment because they are pyrotechnics. For these reasons it has been the policy of the Bureau of Naval Weapons to furnish these kits to the Contractor short many of the survival equipment items. The Contractor's policy has been to maintain two kinds of pararaft kits. One group is completely equipped (at Contractor's expense) and is maintained for use in all bailed aircraft. The other group is made up of rafts received, issued, and used 'as is' in production aircraft. C-2A 148147, in accordance with company policy, should have had completely configured rafts on board at the time of the accident. Incomplete GFE

'as is' kits intended for use in production aircraft were actually on board. Equipment on board the aircraft is listed in Mr. (b) (6) [redacted] statement, enclosure (8). Both types of raft kits are handled by the same personnel and are received, issued, repacked, and stored in the same spaces. Untraceable personnel error allowed installation of incorrect equipment in an experimental aircraft that was to be intentionally flown at various limits of its flight envelope. There was apparently only one item of equipment, the lack of which was significant to this accident; the emergency radio beacon. There is strong evidence in the MOR that Cdr. McLeod inflated his raft, entered it and had the raft kit open in front of him. Availability of the emergency beacon would have vastly improved probability of rescue.

c. Analysis of Engine Failure During Single Engine Operation

Although no conclusive evidence has been produced to corroborate the theory that the loss of both engines occurred because the left engine was feathered for test purposes and the right one failed or was inadvertently shut down, this theory is by far the most probable, based on the intended chronology of tests and the excellent correlation of this intended chronology and the actual radio position reports. The following discussion assumes that the Configuration TO Single Engine Minimum Control Speed Determination test was being performed at the time the emergency commenced. With the left engine feathered and the right engine and generator operating normally, the left engine can be unfeathered and set to produce military power in approximately 15 to 25 seconds, depending on airspeed. With the loss of the right generator, whether it be due to generator failure or engine failure, the feathered propeller cannot be unfeathered. Failure of the operating engine will cause the generator to drop off the line at 94% engine RPM and the hydrauliccally driven emergency generator which powers only the essential buses to automatically come on the line. This 6% engine RPM reduction occurs in less than one second which is considerably less than the time required to unfeather a propeller. Therefore, a sudden loss of the operating engine would prevent the unfeathering of the remaining good engine. The engine will contine to decelerate to approximately 30% RPM, depending on airspeed. If failure of the operating engine is not due to mechanical or system failure, it can be restarted at any time from its windmilling condition. It should be further pointed out here that it is impossible to feather both propellers simultaneously due to the lack of electrical power. Furthermore, it can be reasonably assumed that at least one engine was windmilling during the ditching, since the ditching was controlled and hydraulic power from a windmilling engine is essential to the operation of the flight controls. Also, hydraulic power is required to operate the emergency generator which must have powered the UHF radio during the final emergency radio transmission when Flight 94 stated that he had lost both engines.

d. Material Failure Since it appears that the most likely cause of the accident was failure of the right engine while the left engine was intentionally feathered for test purposes, a thorough study was made of all records concerning both engines. Flight discrepancies recorded against the engines for approximately the preceding four months are shown in enclosure (9). While there seems to be nothing of sufficient significance to warrant a conclusion regarding the cause of the possible engine failure, there did seem to be an unusual number of discrepancies against the right engine as compared to the almost trouble-free left engine. Neither the engine log books nor the work order files contributed any evidence of other than normal maintenance and operation. The Maintenance Officer's statement is contained in enclosure (10).

VIII CONCLUSIONS

1. The actual cause of both engines being inoperative in unknown.
2. The most probable cause of the accident is the failure of one engine while the other was feathered for test purposes.
3. Briefing, planning and preparation for the flight was adequate.
4. Material condition of the airplane, as far as can be determined, was adequate for safe conduct of the flight.
5. The ambiguous emergency position report contributed to the failure of the search.
6. Lack of an emergency radio beacon in the seat pan survival kits, lack of time available to put on the quick-donning antiexposure suits stowed in the cargo compartment, and the indicated neck injury to the co-pilot all probably contributed to the failure of successful survival.

IX RECOMMENDATIONS

1. Bureau of Naval Weapons procedures should be revised so that where pararaft kits are furnished to airplane prime contractors, a full compliment of survival equipment is furnished therewith in order to provide maximum safety for production test pilots, Navy acceptance test pilots, and ferry pilots.
2. All experimental or developmental test flights of multi-engine aircraft which involve single engine operation should be required to use an additional method of flight monitoring such as either:
   a. Surveillance by a chase aircraft;or
   b. Monitoring by telemetry (this presumes remaining in the vicinity of and in voice communication with the ground telemetry station);or
   c. Continuous radar tracking employing SIF/IFF
3. All flight surgeons should be encouraged to use every possible method to impress Naval aviators under their cognizance with the lethal character of cold water.
4. Maximum effort should be made to develop antiexposure equipment that may be comfortably worn on flights of long duration over water such as those conducted by modern COD, AEW, and ASW aircraft.

2ND-BASH-1

BUREAU OF NAVAL WEAPONS REPRESENTATIVE
BETHPAGE, LONG ISLAND, NEW YORK 11714

IN REPLY REFER TO:
PW:mf
Ser. PW-331
17 DEC 1965

SPECIAL HANDLING REQUIRED IAW OPNAVINST 3750.6 SERIES

From: Bureau of Naval Weapons Representative, Bethpage
To: Commander, U.S. Naval Aviation Safety Center

Subj: BUWEPSREP, Bethpage AAR Ser 1-65A concerning C-2A BuNo 148147 Accident occuring 29 April 1965, Pilot MCLEOD

Ref: (a) NAVAVSAFCEN Ltr NASC/dy, Ser 17/1873 of 8 December 1965

1. Reference (a) requested that the copy of the AAR forwarded to the Allison Division, General Motors Corporation be reacquired.

2. This copy was not forwarded directly to Allison Division, but was submitted to the AFPR (Air Force Plant Representative), located at Allison Division, General Motors Corporation. This officer is not unlike the BUWEPSREPs at Navy Contractor Plants. Unless further direction is received, subject accident report will not be reacquired from the AFPR.

3. Also, in accordance with reference (a), the copy of the AAR together with all endorsements are being forwarded to NAVAEROREC0VFAC.

(b) (6) [redacted]

By direction

DEPARTMENT OF THE NAVY
BUREAU OF NAVAL WEAPONS
WASHINGTON, D.C. 20360

IN REPLY REFER TO
NWSA
FSA-31:JRM
12 November 1965

SPEEDLETTER

From: Chief, Bureau of Naval Weapons

To: Commander, U. S. Naval Aviation Safety Center

Subj: Bureau of Naval Weapons THIRD ENDORSEMENT of 4 November 1965 on AAR, BWR, Bethpage serial 1-65A, 29 April 1965, C-2A, BUNO 148417, pilot McLEOD; correction of

1. Correct reference (a) of the subject endorsement to read as follows:

"(a) BUAER ltr AER-MA-365/22 of 12 April 1956"

A. T. PIMENTEL, JR.
By direction

Copy to:
NATC PAX RIVER
BUWEPSREP BETHPAGE

HISTORY OF MODEL C-2A AIRPLANE BUNO 148147, CONCERNING BWR BETHPAGE SERIAL 1-65A, 29 APRIL 1965, C-2A BUNO 148147, PILOT MCLEOD

The model C-2A airplane BUNO 148147 was the first of two prototype carrier on-board delivery (COD) airplanes built by the Grumman Aircraft Engineering Corporation (GAEC) for the U.S. Navy. This first C-2A was assembled by using the same wing, engines, main landing gear, tail surfaces and cockpit components of the number one E-2A airplane of the same bureau number. First flight of E-2A Bureau Number 148147 was made on 21 October 1960 and, flew a total of 733 hours. During this period the E-2A was used for flying qualities and performance development flights by the Contractor and for three phases of the Navy Preliminary Evaluation and the Board of Inspection and Survey Trials. Two new engines were installed on 3 September 1962, and accumulated a total of 270.5 hours before conversion was considered accomplished on 25 August 1964 and the first flight was performed on 18 November 1964. The aircraft was accepted by the Navy on 30 November 1964. A total of 116.3 hours were subsequently accumulated on the C-2A prior to its loss on 29 April 1965, bringing the total time on the common airframe parts to 849.3 hours and the engine time to 386.8 hours.

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

ENCLOSURE (1)

STATEMENT OF (b) (6) [redacted] NATC FLIGHT TEST PROJECT ENGINEER FOR THE C-2A AIRPLANE, SUBMITTED TO AAR BD 3 MAY 1965, CONCERNING BUWEPSREP BETHPAGE 1-65A, 29 APRIL 1965, C-2A BUNO 148147, PILOT McLEOD.

I am Mr. (b) (6) [redacted] project engineer for the C-2A airplane and am assigned to the Flying Qualities and Performance Branch, Flight Test Division, Naval Air Test Center, Patuxent River, Maryland. It was my responsibility to work with the project pilots to formulate a test program for the Phase I NPE to test suspected critical flying qualities and performance areas and to coordinate the engineering and data reduction portions of the program.

The pilot and co-pilot were completely briefed about the scope of the tests and the methods to be used for the tests. The project engineer briefed on all flight cards for the flight except for the "WO LONG STAB" card for which LT (b) (6) [redacted] USN briefed since he had formulated the method of test to satisfy the requirements of paragraph 3.3.1.1 of Spec, MIL-F-8785 (ASG)-2 Military Specification Flying Qualities of Piloted Airplanes of 17 October 1955. It is estimated that this briefing took place about 1400 to 1430 EDT, 29 April 1965. The pilot and co-pilot departed the briefing area prior to 1500 EDT to man the airplane.

The first flight card was INSTRUMENTATION PHASE CHECK with which the pilot was familiar and consisted of pre and post-flight control system cycles and a series of inflight maneuvers used to check and coordinate test instrumentation.

The second card was CROSSWIND TAKE-OFF for which the pilot was briefed to select trim settings he felt he would like to use depending on the crosswind. He was briefed to use a left crosswind if possible, use an instrumentation phenomenon light to indicate brake release, and to indicate on the card his minimum speed to maintain straight ground path with rudder only. He was also to comment on the airplane's lateral and directional characteristics during the take-off. The pilot had been co-pilot on a previous crosswind take-off and was familiar with the card.

The third card was LONGITUDINAL TRIM CHANGE. The altitude and airspeeds for initial trim were explained to the pilot and he was told that the configuration changes were as specified in Table IV of spec. MIL-F-8785 (ASG)-2. The pilot had no comments or questions about the card.

The fourth card was STATIC AND DYNAMIC LONGITUDINAL STABILITY in configuration G (Glide) for which the trim airspeed and altitude were pointed out together with approximate desired speeds for stabilizing out of trim. The pilot had used similar cards in previous flights for other configurations. The pilot's only question about the card was to ask if Flight Idle Power should be used in configuration G. He was told that he should use Flight Idle Power.

The fifth card was ASYMMETRIC POWER DIRECTIONAL CONTROL in configuration TO (Take-Off).

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ENCLOSURE (2)

Based on the time normally required to complete the first few cards of the flight and time increment between take-off and the distress call, it is possible that the pilot was performing the "ASYMMETRIC POWER DIRECTIONAL CONTROL IN TO" test when the distress call was transmitted (lost both engines). The requirements for this test are defined in paragraph 3.4.12 of Spec. MIL-F-8785(ASG)-2 as amended by paragraph 3.3.1, subparagraph 3.4.12(a) of SD551-1 Detail Specification for model C-2A airplane of 5 August 1963. The test was initially set up so that the pilot would shut down and feather the number one engine and would perform the test at 5,000 ft using military power on the number two engine and obtain stabilized points at decreasing airspeeds starting with 130 KIAS while maintaining constant heading with less than 5 degrees bank angle. These static tests were to be performed at 130, 120, 110, 105, 100, 95 and 90 KIAS or as low an airspeed as the pilot deemed feasible in order to define minimum control speed. The pilot was then to set up Military Power on both engines at 95 KIAS or the lowest speed deemed feasible and perform a simulated engine failure by pulling the emergency fluid shut-off handle for the number one engine with AUTO FEATHER armed to test specification compliance with a dynamic maneuver. During the briefing, however, the pilot questioned whether this maneuver could be performed by power chops from Military to Flight Idle Power. He was advised that this would in fact be a more critical condition since at Flight Idle there would be more drag on the number one engine than if it were in a feathered condition. However, since automatic devices used during normal flying are allowed, the power chops would not give a true indication of specification compliance if airplane controllability was marginal or unsatisfactory at the required speed. The pilot and project engineer agreed that a power chop build-up test would be performed at 10,000 ft to familiarize the pilot with the dynamics involved and to allow estimation of the minimum control speed and then the pilot would descend to 5,000 ft and perform the static build-up with the number one engine feathered before restarting the number one engine and performing the dynamic maneuver by feathering the engine. As stated above the method of feather was initially to pull the emergency fluid shut-off handle. Discussion between Mr. (b) (6) [redacted] the pilot and co-pilot, and the project engineer brought out that this method would not simulate a failure as closely as could be done by setting both engines at Military Power and pulling the number one engine condition lever to the feather position. It was agreed that the dynamic maneuver would be performed utilizing the condition lever and not the emergency fluid shut-off handle. It was indicated on the flight card that the AUTO-FEATHER feature should be armed. During the briefing, however, it was brought out that the maneuver could be performed with the AUTO-FEATHER either armed or unarmed.

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The sixth card was STATIC AND DYNAMIC LONGITUDINAL STABILITY in configuration L (Landing). The pilot had conducted this test at a mid CG position (approximately 27.0% MAC) on an earlier flight and had no questions or comments.

The seventh card was STATIC AND DYNAMIC LATERAL DIRECTIONAL STABILITY in configuration L (Landing). Airspeed, altitude and limit sideslip angles were pointed out to the pilot. The pilot had served as both pilot and co-pilot on previous Lateral-Directional Stability tests in other configurations and had no comments or questions.

The eighth card was a LATERAL CONTROL EFFECTIVENESS CARD in configuration L (Landing) with Stability Augmentation OFF. The altitude and airspeeds for the test were pointed out to the pilot. It was suggested to the pilot that he start with the higher airspeed rolls first and progress to the slower airspeed rolls to the lowest airspeed on the card that he felt could be done safely and feasibly.

The ninth card was SINGLE ENGINE MINIMUM TRIM AND CONTROL SPEED to be used for several configurations. The altitude for the test was pointed out to the pilot. The pilot was instructed to shut down and feather the number one engine since this was the critical engine. A question arose about the airspeed to start the test and it was resolved that the starting airspeed should be a reasonably slow airspeed where trim about all axes was possible. The pilot was then to decrease airspeed while trimming and note the airspeeds where trim about each of the three axes ran out. When trim ran out the pilot was to continue to decrease airspeed and note minimum control (less than 5 degrees bank angle and 180 pounds rudder pedal force). The pilot was to proceed only to stall warning speed (rudder shaker) if control was not limited.

The tenth card was "WO LONG STAB" for which LT (b) (6) [redacted] USN briefed since he formulated the method of test.

The eleventh card was NORMAL STALL to be performed with both engines operating. The stalls were to be done in all configurations at 10,000 ft and were to be approached at 1/2 to 1 kt/sec. The pilot had performed similar stalls at a mid CG position. The pilot had no comments or questions about the card.

The twelfth and thirteenth cards were ASYMMETRIC POWER DIRECTIONAL CONTROL CHARACTERISTICS IN P (Cruise configuration with normal rated power) and WO (Wave-off) configurations. These cards were similar to the ASYMMETRIC POWER DIRECTIONAL CONTROL CHARACTERISTICS IN TO (Take-off) card and the method of test was to be the same except for the different configurations and speeds.

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The fourteenth card was a CROSSWIND LANDING card. This card is similar to the CROSSWIND TAKE OFF card. The pilot had been previously briefed on a similar card for which no test had been performed. The pilot had no questions or comments.

(b) (6) [redacted]

STATEMENT OF (b) (6) [redacted] NATC FLIGHT TEST PROJECT ENGINEER FOR THE C-2A AIRPLANE, SUBMITTED TO AAR ED 3 MAY 1965, CONCERNING BUWEPSREP BETHPAGE 1-65A, 29 APRIL 1965, C-2A BUNO 148147, PILOT MCLEOD.

Detail Spec SD-551-1 of 5 August 1963 C-2A Airplane, Page 20, paragraph 3.3.1 General (Aerodynamic) Para. 3.3.1 contains a statement that airplane flying qualities shall meet the applicable requirements of Spec. MIL-F-8785 (ASG)-2 (Military Specification Flying Qualities of Piloted Airplanes of 17 October 1955) except as indicated by subsequent paragraph numbers which refer to corresponding paragraphs in Spec. MIL-F-8785(ASG)-2.

The following paragraph of Spec. MIL-F-8785(ASG)-2 sets forth the specification requirement that is suspected of being checked at the time of incident.

3.4.12 Directional Control (Asymmetric power) - On all multi engine airplanes in configuration TO with the most critical outboard engine inoperative (with rpm and pitch simulating failure in flight with no corrective action unless automatically provided), it shall be possible, at the lightest normal takeoff loading and with takeoff power on the remaining engine, or engines, to achieve and maintain straight flight with a bank angle not greater than 5 degrees, at all speeds above $1.2V_{S_{TO}}$. Automatic devices which normally operate in the event of power failure may be used. With trim settings normally employed in a symmetric power takeoff, the rudder pedal force required to maintain straight flight with asymmetric power, as defined above, shall not exceed 180 lb.

The requirements as contained in Spec. MIL-F-8785(ASG)-2 was deleted by Detail Spec. SD-551-1

3.4.12 Delete and substitute:

With the most critical engine inoperative, with pitch and rpm simulating failure in flight, with no corrective action unless automatically provided, and with take-off power on the remaining engine, it shall be possible to achieve and maintain straight flight with a bank angle not greater than 5° under the following conditions:

a) In configuration TO all speeds above 95 knots (EAS). With trim settings normally employed in a symmetric power take-off, the rudder pedal force shall not exceed 180 lbs.

b) In configuration WO at all speeds above $1.2V_{S_{PA}}$ (as defined in 3.1.2.1). With trim settings normally employed in configuration PA with symmetric power, the rudder pedal force shall not exceed 180 lbs.

"Automatic devices which normally operate in the event of power failure may be used. With the failure of any single automatic device, the airplane shall not be uncontrollable to the extent that flight cannot be maintained."

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

ENCLOSURE (3)

Tests planned for NPE Flight No. 15 included a test to determine compliance with the requirement contained in Detail Spec. SD-551-1, Page 20, subparagraph 3.4.12(a). It is possible that this test was being conducted at the time of the distress call from the NPE aircraft. The estimated chronology of events for this flight, based on previous elapsed time to complete similar tests is shown in enclosure ( ). This chronology places the above test in the time period from last position report to the distress call.

The two pilots were briefed on the tests to be conducted during this flight at approximately 1430, about 1.5 hours before the take-off time.

The briefing for this test (3.4.12(a)) consisted of stating the objective of this test, and discussing the method and scope of the test. The test consisted of tests at less critical conditions and building up to the actual tests that would show compliance or non-compliance with the specification requirement.

The method to check compliance with this specification requirement was to conduct build-up tests at 10,000 ft in configuration TO (20° flaps, gear down, and military power) before descending to 5000 ft for additional build-up tests prior to checking specification compliance. The build-up tests at 10,000 ft were to commence at 130 KIAS in configuration TO (2 engines operating). At 130 KIAS the engine power lever was to be retarded from the military power position to the flight idle power position rapidly. The objective was to observe the transients resulting from a simulated power loss and to achieve and maintain straight (constant heading) flight with a bank angle not greater than 5° and a rudder pedal force not to exceed 180 pounds (maximum rudder pedal force required for full rudder deflection with this irreversible control system is about 160 lbs). This test was to be repeated at 120, 110, 105, 100, 95, and 90 KIAS. Ninety KIAS corrects to 92.6 KCAS. After determing the dynamic minimum speed to retard No. 1 engine power in configuration TO at 10,000 ft altitude, the pilot was to descend to 5000 ft and establish a trim speed of 130 KIAS with No. 1 engine feathered. The airplane was then to be decelerated (by increasing pitch attitude) to specific speeds of 120, 110, 105, 100, 95, and 90 KIAS to determine the minimum control airspeed in configuration TO with No. 1 engine feathered. Based on the dynamic engine power reduction tests conducted at 10,000 ft and the minimum control speed test conducted at 5,000 ft, the pilot was to select the minimum speed deemed feasible to check this specification requirement item. The test was to be conducted by trimming at the selected airspeed in configuration TO (2 engines) and then trim conditions were established, the No. 1 engine condition lever was to be retarded quickly from the RUN position to the FEATHER position to simulate engine failure. The AUTO FEATHER feature was to be used originally during these tests but it was decided by both pilots during this briefing that the feather sequence (simulating engine failure)

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

would be accomplished in the same manner and elapsed time by placing the engine condition lever to the feather position without AUTO FEATHER armed. It is not known if AUTO FEATHER was armed or unarmed for these tests. Its use was left to the descretion of the pilot.

I have been employed by the Naval Air Test Center (Flying Qualities and Performance Branch, Flight Test Division) since June 1958 as a flight test engineer. Since January 1964, I have been the Head of the V/STOL Section (Supervisory Engineer GS-13) of the Flying Qualities and Performance Branch. I have been project engineer on 9 previous NPE's (F8D, F8E, TF-8A, P-3A, Breguet 1150 (NATO ASW) airplanes), 2 Board of Inspection and Survey (BIS) Trails (A3D-2T and P-3A airplanes) and numerous demonstration and miscellaneous flying qualities, performance, and fuel consumption projects.

(b) (6)

[redacted]

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

ENCLOSURE (3)

STATEMENT OF (b) (6) [redacted], LT (b) (6) [redacted] USN, SUBMITTED TO AAR BD 3 MAY 1965, CONCERNING BUWEPSREP BETHPAGE 1-65A, 29 APRIL 1965, C-2A BUNO 148147, PILOT McLEOD.

I briefed CDR McLEOD on the test method to obtain configuration WO static longitudinal stability with respect to angle of attack. Particular emphasis was placed on having the exact indicated airspeeds and exact altitude at the point of taking data. The detailed test method briefed was as follows: Starting at 900 to 1000 ft add military power (gear down, flaps full down) and trim the airplane during a climb to 2000 ft. Try to get as close as possible to the test speed but plan the first run as a dry run to establish trim, not to record data. Without changing trim descend to 900 to 1000 ft and again add military power. During the climb, fine trim to best test speed at 2000 ft. At this point record airspeed, altitude, elevator trim setting, sensitive angle of attack, production angle of attack and correlation time. Photo panel and magnetic tape should be run in addition to recording cockpit data. This test was to have been repeated at three speeds, 94, 104, and 112.5 KIAS. Maximum AOA on any of the runs would have been approximately 20 units. This test had been performed at gross weights 6000 and 12,000 lb heavier using the same airspeeds.

(b) (6) [redacted]

SPECIAL HANDLING REQUIRED-IN ACCORDANCE WITH PARA 66 OPNAVINST 3750 .6E

ENCLOSURE (4)

ESTIMATED CHRONOLOGY OF EVENTS OF THE FLIGHT INVOLVING C-2A BUREAU NUMBER 148147, 29 APRIL 1965, CONCERNING BWR BETHPAGE SERIAL 1-65A, 29 APRIL 1965, C-2A, BUNO 148147, PILOT MCLEOD

Local Time(Q) to begin EVENT OR TASK	EVENT OR TASK	Estimated Time to complete EVENT OR TASK
1618 ACTUAL	Takeoff	- - - - - - -
	Flight time before starting first card.	5 minutes
1623	Instrumentation phase check prior to flight tests.	2 minutes
1625	Start "Longitudinal trim changes". Altitude 5,000 feet.	15 minutes
1640	Start "Longitudinal stability tests in configuration Glide". Altitude 5,000 feet.	30 minutes
1642 ACTUAL	POSITION REPORT: "Peconic Tower, Flight 94. About...er...one mile north of the center of Block Island."	
1700 ACTUAL	Start of SAGE track of unidentified air target in vicinity of Easthampton, Long Island.	
1709 ACTUAL	POSITION REPORT: "FLIGHT 94, about three miles north of Montauk."TOWER:"Three miles north of Montauk." Flight 94:"Roger. Simulating Single engine." TOWER:"Roger 94."	
	SAGE track position two miles SSW of Block Island.	
1710	Commence build up tests required for single engine tests. Altitude 10,000 feet.	10 minutes
1718 ACTUAL	SAGE track fades out one mile south of Newport, Rhode Island. SAGE estimate 1,500 feet altitude.	
1720	Descend from 10,000 feet to 5,000 feet,	15 minutes

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

Local Time(Q) to begin EVENT OR TASK	EVENT OR TASK	Estimated Time to complete EVENT OR TASK
1720	feather No. 1 engine, and commence build up tests leading up to actual engine shutdown.	15 minutes
1726 ACTUAL	VOICE/POSITION REPORT: "Patuxent Tower, Patuxent Tower..... Correction, Peconic Tower, we've lost both the engines. Uh...don't know whether you read or not, but emergency IFF." Tower: "94, Peconic, Roger. What's your position?" FLIGHT 94: "Roger. We're approximately...uh...on your 2... Correction, about the...uh...090 degree radial and we're off of Montauk. I see a small island, as a matter of fact two small ones. Very, very small, both islands."	
1735	Single engine tests completed.	

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

NNNN
NASC DE COMM NR 038/15
DGB787XC937
RR RUCKDG
DE RUEØ- Ø73 1952255
ZNY EEEEE
BT
UNCLAS E F T O SC
ZUI RUCKDG 257/1952200
ZDK RUEGPA Ø58/1952Ø25/ R 142Ø25Z
RR RUEGUL RUECM RUCKDG RUEGMC
DD RUEGPA Ø58 1952Ø25
ZNY EEEEE
R 142Ø25Z
FM COMFAIRQUONSET
TO RUEGUL/BWR BETHPAGE
INFO RUECM/NAVAIRSYSCOMHQ
RUCKDGNASC
RUEGMC/OMONE
ZEN/NAS QUONSET
RBT
UNCLAS E F TO
SEARCH FORC-2A ACFT VICINITY OF CUTTYHUNK ISLAND
A. YOUR 28Ø126Z MAY
1. THE INVESTIGATION REQUESTED BY REFERENCE A REVEALED THAT ALL AIRCRAFTPARTS WERE RECOVRED ON THE BEACHES OF CUTTYHUNK ISLAND USUALLY AFTER STORM CAUSED ABNORMAL TIDAL CONDITIONS.
2. SINCE THE PARTS WERE CARRIED ASHORE BY WAVE AND TIDAL ACTION OVER SEVERAL MILES OF BEACH NO ACCURATE PROBABLE LOCATION OF THE AIRCRAFT CAN BE DETERMINED. THE GENERAL AREA SURROUNDING CUTTY-HUNK ISLAND WAS THROUGHLY SEARCHED BY A VARIETY OF SENSORS FOLLOWING THE CRASH. UNLESS THE PROBABLE LOCATION OF THE C-2A CAN BE MORE ACCURATELY FIXED IT WOULD NOT BE PROCTICAL TO EXPEND FURTHER SEARCH EFFORTS BASED UPON THIS RECOVERY OF AIRCRAFT PARTS OM THE BEACH.
BT

#38/15/6C

Cog: AI

July 142Ø25Z

C2A 148147 BWR BETHPAGE AAR 4-29-65

NNNN
SAFECEN DE COMM NR 012/001
DGB604XRC327
PP RUCKDG
DE RUEGUL 175 1512150
ZNR UUUUU
BT
UNCLAS SVC ZUI RUECM 1072 1481921 NOTAL RUECM PROTECT FOR
NAVAIRSYSCOMHQ ONLY RUCKDG TAKE FOR FIRST VTIME
DE RUEGUL 111 1480126
ZNR UUUUU
R 280126Z
FM BWR BETHPAGE
TO RUEGPA/COMFAIRQUONPT
INFO RUECM/NAVAIRSYSCOMHQ
RUCKDG/NASC
RUEGMC/COMONE
RUEGPA/NAS QUONPT
BT
UNCLAS
SEARCH FOR C-2A ACFT VICINITY OF CUTTYHUNK ISLAND
A. BUWEPS MSG 031956Z MAY 65
1. SUBJ SEARCH CONDUCTED IN 1965 IN RESPONSE TO REF A PROVED
FUTILE. HOWEVER RECENT RECOVERY OF WRECKAGE BY FISHERMEN IN VICINITY
OF CUTTYHUNK ISLAND PROVIDES MORE ACCURATE LOCATION.
2. REIQEST COMFAIRQUONPT INVESTIAGEE. NAMES AND LOCATIONS OF
PERSONS RECOVERING AIRCRAFT PARTS WILL BE PASSED SEPARATELY TO
COMFAIRQUONPT OPERATIONS.
BT

12/1/66

Copy A I

C21 148147 BWR FR BETHPAGE 4-29-65 MAY 280126Z

NNNN

SAFECEN DE COMM NR014/30
TFDDD
742XRA119N
PP RUCKDG
DE RUEGUC 003 30/01342
ZNR
P 300115Z
FBWR BETHPAGE NY
TO RUECW/NO
RUCKDG/VAVAL AVIATION SAFETY CENTER NORVA
INFO RUECMXUWEFS
RUEGUA/OMNABTHREE
RUECPA/ONATC VAXRIV
RUCKDPVVKLANT
RUCDSQ/WFPR ALLISON DIV GENERAL MOTORS INDIANAPOLIS
RUCKHC/INCLANTFLT
RUECH/XUPERS
RUECM/HNAVVAT
BT
UNCLAS
PRELIMINARY MESSAGE REPORT OF AAR
A.P OPNAVINSTRUCTIONS P3750.6Z
1.P C2A, 148147, FBWR BETHPAGE, PN..
2.P 29APR 65 1726, PVICINITY MONTAUK PT. LONG ISLAND, PN..
3.P NPE TEST
4.P UNKN2,
5.I WHILE TESTING SINGLE ENGINE PERFORMANCE PILOT REPORTED DUAL ENGINE FAILURE
6.P MURDOCH M.PMCLEOD CDR [redacted] USN, 1310PACTIVE, NATC PAX RIVER,

PAGE TWO RUEGUC 003 UNCLAS
UNKNOWN
7.P THOMAS A.PEADES, ILTCDR [redacted] USN, 1310ACTIVE, NATC PAX RIVER,
UNKNOWN COPILOT
8.I NA
9.I NONE
BT

#141-30/65
AAR
3001152 Apr
C2A 148147
4-29-65

SAFECEN DE COMM NR 051/30
UUVB604XRB039
PP RUCKDG
DE RUEGUL 848 30/1440Z
ZNR
P R 301440Z
FM BUWEPSREP BETHPAGE
TO RUECPA/COMNATC
INFO RUECW/CNO
RUCKDG/NAVAL AVIATION SAFETY CENTER
RUECM/BUWEPS
RUCKDP/BWFRRLANT
BT
UNCLAS
AIRCRAFT ACCIDENT BOARD
A. OPNAVINST P3750.6E
B. MY 300115Z
1. IAW A. REQ ASSIGN 2 MEMBERS FOR AAR BOARD CONVENED TO INVESTIGATE CRASH OF C2A REPORTED REF B. DESIRE ONE PILOT AND ONE FLIGHT SURGEON
BT

51/30/65

Cog: PLANS

301440Z/AAR

4-29-65

C2A/

NMNN

SAFECEN DE COMM NR065/30

of AAR

DGA980CRI978
RR RUCKDG
DE RUECPA 038 30/1938Z
ZNR
R 301938Z
FM NAVAIRTESTCEN PAXRIV
TO RUEGUL/BWR BETHPAG
INFO RUECW/CNO
RUCKDG/NAVAVSAFECEN
RUECM/BUWEPS
RUCKDP/BWFRRLANT
BT
UNCLAS
ACFT ACCIDENT BOARD
A. YOUR 301440Z (b) (6) [redacted] PILOT AND LT (b) (6) [redacted]
1. IAW REF A LCDR
FLT SURGEON ASSIGNED.
BT

#65/30/65

Ccg: AI

C2A/148147

4-29-65

301938Z/APP

SAFECEN DE COMM NR082/30

#82/30

DGB774XRC991
PP RUCKDG
DE RUEGUC 046 30/2221Z
ZNR
P 302207Z
FM BWR BETHPAGE
TO RUECW/CNO
RUCKDG/NAVAL AVIATION SAFETY CENTER NORVA
INFO RUECM/BUWEPS
RUEGUA/COMNABTHREE
RUCKDP/BWFRRLANT
RUCKHC/CINCLANTFLT
RUECH/BUPERS
RUECM/CHNAVMAT
RUCDSQ/AFPR ALLISON DIV GENERAL MOTORS INDIANAPOLIS
BT
UNCLAS
SUPPLEMENTARY MSG. REPORT OF AAR
A. OPNAVINSTR P3750.6E
B. MY 300115Z
1. C-2A, 145147, BWR BETHPAGE, MCLEOD
2. LOCAL VFR FLIGHT PECONIC RIV AIRPORT, NPE TEST
3. ALFA
4. COLLISION WITH WATER
5. WHILE TESTING, SINGLE ENGINE PERFORMANCE PILOT REPORTED DUAL ENGINE FAILURE

Supp AAR

PAGE TWO RUEGUC 046 UNCLAS
6. PECONIC RIVER AIRPORT 291628Z, CLEAR VIS 10, TEMP 61, DEWPOINT 49, WIND 190/10, ALTIMETER 29.87
7. NONE
8. N.A.
9. N.A.
10. UNKNOWN
11. N.A.
12. SEATPAN AND PK-2 CASE FOUND FLOATING VICINITY CUTTYHUNK ISLAND ABOUT 21 HOURS AFTER ACCIDENT, IDENTIFIED AS BELONGING TO AIRCRAFT. SEARCH CONTINUING.
BT

302207Z APR

C2A/145147

4-29-65

SAFECEN DE COMM NR 041/05
DGA053XRA714
RR RUCKDG
DE RUEGUL 951 05/1850Z
ZNR
R 051850Z
FM BUWEPSREQ BETHPAGE
TO RUECW/KNO
RUCKDG/NASC NORVA
INFO RUECM/BUWEPS
RUCKDP/BWFRRLANT
RUCKHC/CINCLANTFLT
RUECH/BUPERS
RUECM/CH NAVAL MATERIAL
RUECPA/NATC PAXRIV
BT
UNCLAS
SECOND SUPPLEMENTARY MSG REPORT OF AAR
A. OPNAV INST P 3750.6E
B. MY 302207Z APR NOTAL
C. BUWEPS 031956Z NOTAL
1. AMPLIFYING REF B USCG CUTTER VIGILANT RECOVERED BODY OF CDR M M MCLEOD AT 011350Q LOCATED: LATITUDE 41-25.5 NORTH, LONGITUDE 71-00 WEST
BODY OF LCDR T A EADES RECOVERED AT 011230Q LOCATED: LATITUDE 41-24.6 NORTH LONGITUDE 70-58.2 WEST. BOTH BODIES TAKEN TO NAVAL HOSP NEWPORT 1 MAY FOR AUTOPSY. NATC FLIGHT SURGEONS PRESENT

2 SUPP

AAIR

PAGE TWO RUEGUL 951
2. SEAT PAN/LIFE RAFT CASE RECOVERED BY HELO ABOUT 301200Q APRIL LOCATED APPROX TWO MILES SSE CUTTYHUNK ISLAND. SEAT PAN/LIFE RAFT RECOVERED BY HELO ABOUT 011300Q LOCATED APPROX 300 YARDS SOUTH OF CUTTYHUNK ISLAND. PIECE OF CABIN UPHOLSTERY/ASBESTOS RECOVERED BY HELO AT 011355Q LOCATED NEAR SOW AND PIGS REEF ONE MILE S/W OF CUTTYHUNK ISLAND
3. USCG OFFICIALLY TERMINATED SEARCH AFTERNOON ONE MAY. CONFAIR QUONSET CONTINUING SEARCH WITH S-2 AIRCRAFT PER REF C REQUEST
BT

05185 Z

C2A/148147 4-29-65

SAFECEN DE COMM NR042/05

DGA051CRK654
RR RUCKDG
DE RUECW 364 05/1926Z
ZNR
R 051926Z
FM CNO
TO RUCKKC/CINCLANTFLT
INFO RUCKDD/COMSERVLANT
RUCKDA/COMNAVAIRLANT
RUCKDR/COMSUBLANT
RUCKDG/NAVAVNSAFECEN
RUEGPA/COMFAIRQUONSET
RUEGMC/COMONE
RUEGUC/COMTHREE
RUEGUL/BUWEPSREP BETHPAGE
RUECD/ONR
RUEGM/BUWEPS
BT
UNCLAS
LOCATION AND SALVAGE C2A BUNO 148147
A. BWR BETHPAGE 301152Z APR
1. IT IS PARTICULARLY IMPORTANT TO DETERMINE CAUSE OF ACCIDNT REF A SINCE IT IS THE FIRST ACFT OF NEW COD SERIES. REQUEST VIGOROUS EFFORT BE MADE TO RECOVER WRECKAGE.
BT

#042/05

of AAR,

COG ACE

051926Z May

C2A/148147

4-29-65

C-2A Package

NNNN
SAFECEN DE COM M NR 032/006

#32/6/65

DGB031HCB063
RR CUCKDG
DE RUCKHC 074 06/1754Z
ZNR
R 061752Z
FM CINCLANTFLT
TO RUCKDD/COMSERVLANT
RUCKKM/COMINLANT
INFO RUECW/CNO
RUECM/BUWEPS
RUCKDG/NAVAVNSAFECEN
RUCKDR/COMSUBLANT
RUCKDA/COMNAVAIRLANT
RUEGUL/BUWEPSREP BETHPAGE
BT
UNCLAS
1. TAKE CNO 051926Z PASEP FORAC. DIRLAUTH ALCON.
BT

Cog: AI

C29 148147 4-29-65 061752Z

NNNN
SAFECEN DE COMM NR 034/06
DGB031XRB719
RR RUCKDG
DE RUEGPA 041 06/1962
ZNR
R 061946Z
FM COMFAIRQUONSET
TO RUEGUU/BUWEPSREP BETHPAR

INFO RUCKUC/COMINCLANTFLT
RUCKDD/COMSERVLANT
RUCKDA/COMNAVAIRLANT
RUCKDR/COMSUBLANT
RUCKDG/NAVAVNSAFECEN
RUEGMC/COMONE
RUEGUC/COMTHREE
RUECD/ONR
RUECM/BUWEPS
ZEN/NAS QUONPT
BT
UNCLAS
LOCATION AND SALVAGE C2A BUNO 141147/SITREP ONE
1. 4 MAY CONDUCTED MAD SWEEP WITH TWO S-2D AREA CENTERED 41-25N AND 71-00W. TWO CONTACTS DEVELOPED ALFA POSIT 41-25.8N/70-59.9W. CLASSIFIED LOW CONFIDENCE BY FLIGHT CREW. BRAVO POSIT 41-22N/71-03.7W CLASS HIGH CONF BY FLIGHT CREW.
2. 5MAY A. CONTINUED MAD SWEEP ABOVE AREA WITH TWO S-2 A/C. RECONFIRMED CONTACT BRAVO. POSIT CLOSELY CORRELATES WITH POSIT COMPUTED BY FLEET WEATHER FACILITY BASED ON EFFECT OF CURRENT/TIDE/WIND FROM KNOWN POSIT AND TIME OF RECOVERY OF BODY CDR MCLEOD. B. DEVELOPED

PAGE TWO RUEGPA 041 UNCLAS
CONTACT CHARLIE POSIT 41-27.7N/70-56.2W. CLASS HIGH CONF BY FLIGHT CREW. DOES NOT CORRELATE WITH KNOWN TIDE/CURRENT EFFECT. HOWEVER APPEARS TO CORRELATE WITH PILOTS DECRIPTION OF AREA JUST PRIOR TO CRASH.
3. YSD WITH SIX DIVERS UNDERWAY FROM NAS QUONPT FOR CONTACT BRAVO 061200Z. ETA ON STATION 061615Z.
4. NEXT SITREP 071500Z.
BT

#34/06

COG: Records

MAY 061906 Z

NNNN
SAFECEN DE COMM NR
SAFECEN DE COMM NR 004/007

DGB125KCB071
PP RUCKDG
DE RUCKDD 025 06/2335Z
ZNR
P 062249Z
FM COMSERVRON EIGHT
TO RUCKIM/COMINLANT
RUCKG/NIXD/USS RECOVERY
INFO RUCKHC/CINCLANTFLT
RUCKDA/COMNAVAIRLANT
RUCKDR/COMSUBLANT
RUCKDG/NAVAVNSAFECEN
RUEGPA/COMFAIRQUONSET
RUEGMC/COMONE
RUEGUC/COMTHREE
RUEGUL/BUWEPSREP BETHPAGE
RUECD/ONR
RUEGM/BUWEPS
RUEGUA/NAS NYK
ZEN/COMSERVLANT
RUECW/CNO
BT
UNCLAS A. CNO 051926Z NOTAL
B. BWR BETHPAGE 300115Z APR PASEP
1. FOR COMINLANT. REQUEST YOU PROVIDE SHIP WITH UDL CAPABILITY TO SEARCH FOR DOWNED AIRCRAFT CITED REF A AND B. MAD CONTACTS HAVE BEEN LOCATED AT

41-25.8N
70-59.9N
41-22N
71-03.7W AND
41-27.7N

4/7/65

Cog: AI
Records

PAGE TWO RUCKDD 025 UNCLAS
70-56.2W

2. FOR RECOVERY.
A. WHEN RFS 6 MAY PROCEED VICINITY POSITS CITED PARA 1 ABOVE TO ARRIVE 7 MAY. ASSIST LOCATING SHIP AS NECESSARY IN SEARCH FOR AIRCRAFT AND WHEN LOCATED CONDUCT SALVAGE OPS.
B. LCDR (b) (6) (b) (6) MY STAFF WILL BOARD YOU AT SENCE AND ASSUME DUTIES OSC. LCDR (b) (6) WILL ARRANGE NECESSARY LIAISON COMFAIRQUONSET AND FOR ALL INFO PERTAINING TO CRASH AND DISPOSAL INSTRUCTIONS.
C. MAKE MOVREPS. OSC WILL MAKE SITREPS AS DIR SEP.
BT

062249Z/may

BUWEPS BETHPAGE 1-65A, 29 APRIL 1965, C-2A BUNO 148147, PILOT MCLEOD

INDEX OF ENCLOSURES

1. History of Model C-2A Airplane, BUNO 148147
2. Statement of (b) (6) [redacted] NATC Flight Test Project Engineer for the C-2A Airplane
3. Statement of (b) (6) [redacted] NATC Flight Test Project Engineer for the C-2A Airplane
4. Statement of LT (b) (6) [redacted] USN
5. Estimated Chronology of Events of the Flight Involving C-2A BUNO 1[illegible]47, of 29 April 1965
6. Medical Officer's Report (Original only)
7. (1) Portion of Chart Number 15466-OA
7. (2) Portion of C.& G.S. Chart Number 1210
8. Statement of MR. (b) (6) [redacted] GAEC Employee In Charge of the Aviators Equipment room at Peconic River Airport
9. Engine History for Calendar Year 1965 of Model C-2A Airplane
10. Statement of (b) (6) [redacted] Manager Aviation Maintenance, Grumman Aircraft Engineering Corporation
11. Flight Clearance for Flight 94 on 29 April 1965
12. Portion of Radio Log from Grumman Peconic River Airport Tower on 29 April 1965

RECEIVED NOV 1965

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

ARMED FORCES INSTITUTE OF PATHOLOGY
WASHINGTON 25, D. C.

REPORT OF POST-MORTEM EXAMINATION ON AIRCRAFT ACCIDENT FATALITY

IDENTIFICATION

4-29-65

MC LEOD, MURDOCH MILLS (b) (6) [redacted]
CDR USN (b) (6) [redacted] (b) (6) [redacted]
USNH NEWPORT RI
7 JUN 65 A65-31 AP SBT
RUSH L-9
RUSH 10 JUNE 65 A-65-31 T

TO: U. S. Naval Hospital
Newport, Rhode Island

CC: CO, USNASC, Norfolk, Va.
CP-57, CNO
BUWEPS, RAAE-13
CO, USN, SAM, NAS, Pensacola, Florida

TYPE: C-2A BUNO.: 148147

1. AIRCRAFT ACCIDENT DATA
Flight was one of a series of test and evaluation flights. Aircraft reported simulation of single engine. Shortly thereafter aircraft transmitted that it had lost both engines and declared an emergency. The bodies of both members of the crew were located about 1 mile apart about 48 hours later. Both victims were floating with Mae Wests inflated.

See AFIP report dated 17 May 1965

2. TOXICOLOGY
Carbon Monoxide - less than 2%, if any
Lactic acid - 151 mgm%
Alcohol - none found

(b) (6) [redacted]

3. [redacted]

4. [redacted]

5. CONCLUSIONS
This subject made a successful egress from the aircraft after it was ditched presumably in a wings-level attitude, at approximately 100 knots airspeed. The wind velocity was 10 knots, the wave height 2-4 feet and the water temperature 38° to 44°. The only impact injuries were minor abrasions over the dorsal aspects of the index fingers and the right mandible. These were attributed to the yoke and instrument panel and the boom mike respectively. There was no evidence of antecedent disease. The cause of death was attributed to prolonged immersion in sea water with terminal aspiration.

6. (b) (6) [redacted] CAPT., USAF, MC

7. DATE OF REPORT 5 August 1965

8. (b) (6) [redacted] CAPTAIN, MC, USN DEPUTY DIRECTOR

9. SIGNATURE

AFIP FORM 178 (1 MAY 62)

ARMED FORCES INSTITUTE OF PATHOLOGY
WASHINGTON 25, D. C.

REPORT OF POST-MORTEM EXAMINATION ON AIRCRAFT ACCIDENT FATALITY

IDENTIFICATION

HADEN, THOMAS ALLEN (b) (6) (b) (6) [redacted]
LCDR USN (b) (6) [redacted]
USNH NEWPORT RI
7 JUN 65 A65-32 AP EST
RUSH L-9
10 JUNE 65 A65-32 T

TO: U. S. Naval Hospital
Newport, Rhode Island

CC: CO, USNASC, Norfolk, Va.
OP-57, CNO
BUWEPS, RAAE-13
CO, USN, SAM, NAS, Pensacola, Florida

TYPE: C-2A BUNO.: 148147

1. AIRCRAFT ACCIDENT DATA
Flight was one of a series of test and evaluation flights. Aircraft reported simulation of single engine. Shortly thereafter aircraft transmitted that it had lost both engines and declared an emergency. The bodies of both members of the crew were located about 1 [illegible] apart about 48 hours later. Both victims were floating with Mae Wests inflated.

(b) (6) [redacted]

2.

3.

5. CONCLUSIONS
This subject made a successful egress from the aircraft after it was ditched presumably in a wing's level attitude at approximately 100 knots airspeed. The wind velocity was 10 knots, the wave height 2-4 feet and the water temperature 38° to 44°. The only significant traumatic injuries were revealed by x-ray. These comprised a fracture of a facet of the 6th cervical vertebra and an avulsion of the spinous process of C-4. No damage was evident to the spinal cord. In view of these findings, the successful exit from the aircraft and the uniform blood chlorides in both atrial chambers, death was attributed to immersion. The microscopic finding of a pituitary adenoma in all likelihood was not a contributory factor in this accident.

6. (b) (6) [redacted] CAPT., USAF, MC

7. DATE OF REPORT 5 August 1965

8. (b) (6) [redacted]
CAPTAIN, MC, USN
DEPUTY DIRECTOR

9. SIGNATURE

AFIP Form 178 (1 MAY 62)

MEDICAL OFFICER'S REPORT OF A/C AC[illegible]NT, INCIDENT, OR GROUND ACCIDENT - PA[illegible]

OPNAV FORM 3750-8 (REV. 3-63) SPECIAL HANDLING REQUIRED - *See OPNAVINST 3750.6E for instructions.*

OPNAV REPORT 3750-7

SECTION A - IDENTIFICATION

1. FROM (Name and mailing address of activity)	2. MOR NUMBER	3. LEAVE BLANK
Bureau of Weapons Representative, Beth Page, Long Is., New York	1-65-A	

4. TYPE OF MISHAP	5. TIME & ZONE	6. DATE	7. GEOGRAPHICAL LOCATION
[X] ACCIDENT [ ] GROUND ACCIDENT [ ] INCIDENT	17260	29 APR 65	Vicinity of Cuttyhunk Is. Mass.

8. MODEL A/C	9. BUNO	10. NO. OF OCCUPANTS	11. DAMAGE CODE	12. UNIT OPERATING A/C
C2A	148147	2	A	On Bailment to Grumman

13. INDIVIDUALS INVOLVED USE ADDITIONAL SHEETS IF REQUIRED NAME (Last, first and middle initial)	14. UNIT TO WHICH ATTACHED	15. RANK/RATE	16. FILE/SERV. NO. DESIGNATOR	17. DUTY ASSIGNMENT ABOARD A/C	17. DUTY ASSIGNMENT AT MISHAP	18. DATE OF LAST PHYSICAL	19. PHYSICALLY QUALIFIED FOR FLIGHT	[illegible] SERVICE	21. INJURY CODE	22. DISPOSITION
A. McLEOD, Murdock M.	Flight Test Div. NATC	CDR	(b) (6) [redacted]	A	A	8/64	Yes	1	A	F
B. EADES, Thomas A.	Weapons Test Div. NATC	LCDR	(b) (6) [redacted]	C	C	9/63	Yes	1	A	F
C.										
D.										

23. CLARIFICATION OF ITEMS 13-22 WHEN NECESSARY

N/A

24. MODEL-OTHER A/C IF INVOLVED	25. BUNO	26. NO. OF OCCUPANTS	27. UNIT OPERATING A/C	28. DAMAGE CODE	29. MOR NO.
N/A	N/A	N/A	N/A	N/A	N/A

30. NARRATIVE ACCOUNT OF MISHAP (*Use additional 8 x 10½ sheets if required*)

See Attached Sheets

31. PRIMARY CAUSE FACTOR ASSIGNED BY ACCIDENT BOARD

Unknown pending recovery of Aircraft

32. CONTRIBUTING CAUSE FACTOR ASSIGNED BY ACCIDENT BOARD

Unknown pending recovery of Aircraft

33. POSSIBLE CAUSE FACTOR ASSIGNED BY ACCIDENT BOARD

Unknown pending recovery of Aircraft

34. HAVE ALL FINDINGS, CONCLUSIONS, & RECOMMENDATIONS BEEN MADE AVAILABLE TO THE A/C ACCIDENT BOARD? IF NO, EXPLAIN. YES [ ] NO [X] Complete Autopsy report not available at this time.

(b) (6) [redacted]

[illegible]ED COPIES [illegible]HED

[illegible]DATE

6/10/65

OP-C2F

U. S. GOVERNMENT PRINTING OFFICE: 1963—685374

NARRATIVE SUMMARY

This flight was one of a series of test and evaluation flights being carried out during the Navy preliminary evaluation of the C-2A. The flight originated from Peconic Airport, Long Island. This flight was programmed and briefed to include:

1. Crosswind take-off
2. Inflight instrument check
3. Longitudinal trim changes at 5000'
4. Glide configuration longitudinal stability at 5000'
5. Asymmetric power directional control in TO configuration at 10,000' and 5000'
6. Landing configuration longitudial stability at 5000'
7. Landing configuration lateral/directional stability at 5000'
8. Landing configuration lateral control effectiveness 5000'
9. Minimum trim and control speeds with #1 engine feathered at 5000'
10. Wave off configuration longitudinal stability at 2000'
11. Normal stalls at 1000'
12. Assymetric power directional control in clean configuration with normal rated power on one engine at 10,000' and 5000'
13. Assyminetric power directional control in wave off configuration at 10,000' and 5000'
14. Crosswind landing

The weather was clear with 10-mile visibility. The wind was 10-knots 290°. The air temperature was 61°.

The aircraft had accumulated 1117.5 hours of flight time. It had been flown 2.7 hours the previous flight, the day of the accident. There were no major discrepancies. The DME was inoperative. Pre-flight, start, and pre-taxi checks were apparently normal.

The flight received taxi clearance at 1609Q and was airborne at 1618Q. At 1639Q there was a position report which placed the flight 1 mile north of the center of Block Island. At 1709Q a transmission was received "three miles North of Montauk - simulating single engine." At 1726Q the following transmission "Patuxent Tower, Patuxent Tower, correction, Peconic Tower, we've lost both engines. Don't know whether you read or not but emergency IFF." At this point the tower asked for a position report and received the following: "We're approximately on your 27 - correction, about the 090 radial and we're off Montauk. I see a small island, as a matter of fact two small ones. Very, very small both (unclear) islands." Transmission had become progressively weaker and at this point faded out entirely.

Immediate search efforts were begun involving Suffolk County AFB SAR, Coast Guard Helos, fixed wing, and cutters, and five (5) fixed wing aircraft from Grumman Peconic Airport.

One seat pan and raft assembly was found by a fishing boat the morning of 30 April 1965. It was found about 2-3 miles Southeast of Cuttyhunk Island. That afternoon the Coast Guard picked up a seat pan without raft assembly and a portion of the cabin

Narrative Summary (continued)

overhead lining. This section of liner is held in place only by strips of "Velcro" tape and several screws. The bodies of CDR McLeod and LCDR Eades were recovered by a 40 foot Coast Guard boat on 1 May 1965, at about noon, see enclosures (1), (2), and (3). They were about 1 mile apart and 1-2 miles off Cuttyhunk Island, South and West. They were floating with Mae West's inflated and flight gear intact. LCDR Eades Mae West light was off but operable. A packet of dye marker was partially torn open. Both CO_2 cartridges had been fired.

CDR McLeod's Mae West light was inoperable because of sea water leakage. Both CO_2 cartridges had been fired. One flare was missing from his Mae West and several packets of dye marker from a PK-2 raft packet were attached to his Mae West. A 50 foot length of nylon cord from a PK-2 raft packet was tied into his boot strings. The PK-2 raft was not found. The bodies were transferred to Coast Guard cutter Vigilance which was in the vicinity, see enclosure (13)

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 1

OPNAV FORM 3750-6A (REV. 3-63) — SPECIAL HANDLING REQUIRED. — *See OPNAVINST 3750.6E for instructions.* — OPNAV REPORT 3750-7

SECTION B - FACTORS CONTRIBUTING TO OR RELATING TO MISHAP BY PHASE OF MISHAP *(List in order in accordance with Section B of inst.)*

PHASE CODE: A - ACCIDENT; E - ESCAPE/EGRESS; S - SURVIVAL; R - RESCUE

FACTOR WEIGHT: M - MAJOR; C - CONTRIBUTING; Q - QUESTIONABLE OR POSSIBLE

1. FACTORS	2. PHASE OF MISHAP (See code at right) A	E	S	R
Lack of Exposure				
Protection			M	
Poor Judgment			Q	

REMARKS

In compliance with OPNAV 3710.7B-825 Quick' Donning Anti Exposure suits were available. However, in a sudden ditching situation there was no time to utilize them.

Intentionally feathering one engine over water. If in fact they had progressed to that phase of the testing at the time of the emergency

SECTION C AIR CREW DATA

1. FLIGHT TIME LAST 30 DAYS (All models)	21.4
2. FLIGHT TIME LAST 24 HOURS (All models)	1.4
3. NO. FLIGHTS LAST 24 HOURS (Include present flight)	2.1
4. TIME AT CONTROLS THIS FLIGHT	1.1
5. TOTAL FLIGHT TIME ALL MODELS	3342

FLIGHT TIME THIS MODEL	6. TOTAL	7. LAST 30	8. 60 DAYS	9. 90 DAYS
	8.8	8.8	8.8	8.8

10. NO. GROUNDINGS PAST YEAR	None
11. NO. DAYS GROUNDED PAST YEAR	None

12. DATES AND TYPES OF PRIOR MISHAPS

1950 - Taken from log book
one accident in 1950

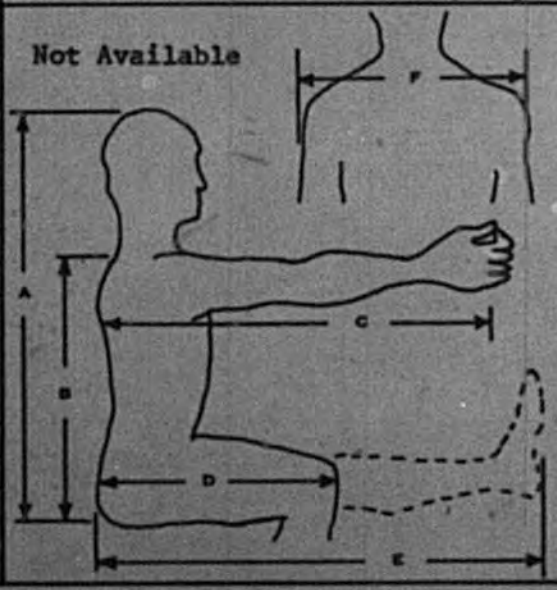
13. NO. HRS. IN A DUTY STATUS LAST 24 HRS.	9
14. DIRECTION FACING AT TIME OF MISHAP	Forward

15. LOCATION AT TIME OF MISHAP

Left Seat

SECTION D ANTHROPOMETRIC DATA (Compare with health record)

Not Available



AGE	
HEIGHT	IN.
WEIGHT	LB.
A. SITTING HEIGHT	IN.
B. TRUNK HEIGHT	IN.
C. FUNCTIONAL REACH	IN.
D. BUTTOCK - KNEE	IN.
E. LEG LENGTH	IN.
F. SHOULDER WIDTH (BIDELTOID)	IN.

16. **LABORATORY TESTS AND RESULTS**

SPECIMEN	TEST PERFORMED	RESULTS	SPECIMEN	TEST PERFORMED	RESULTS
BLOOD 1.			TISSUE: (CNS)		
Rt.Auricle 2.	Chloride	112 MEQ	MUSCLE	Autopsy Report to Fallow	
Lt.Auricle 3.	Chloride	160 MEQ	VISCERA		
URINE Submitted to AFIP			OTHER:		
G.I. CONTENT "	Chloride	248 MEQ			

17. X-RAY RESULTS

Total body X-Rays revealed only pulsonary congestion

MOS NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	A

NAME OF INDIVIDUAL

McLEOD, Murdock M.

OP-65F

☆ U. S. GOVERNMENT PRINTING OFFICE: 1963—685973

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE

OPNAV FORM 3750-8A (REV. 3-63) — SPECIAL HANDLING REQUIRED. — *See OPNAVINST 3750.6E for instructions.* — OPNAV REPORT 3750-7

SECTION B - FACTORS CONTRIBUTING TO OR RELATING TO MISHAP BY PHASE OF MISHAP *(List in order in accordance with Section B of inst.)*

1. FACTORS	2. PHASE OF MISHAP (See code at right) A	E	S	R
Lack of Exposure				
Protection			M	

PHASE CODE: A - ACCIDENT; E - ESCAPE/EGRESS; S - SURVIVAL; R - RESCUE

FACTOR WEIGHT: M - MAJOR; C - CONTRIBUTING; Q - QUESTIONABLE OR POSSIBLE

REMARKS

In compliance with OPNAV 3710.7B-825 Quick Donning Anti Exposure suits were available. However, in a sudden ditching situation there was no time to utilize them.

SECTION C AIR CREW DATA

1. FLIGHT TIME LAST 30 DAYS *(All models)*	24.9
2. FLIGHT TIME LAST 24 HOURS *(All models)*	3.1
3. NO. FLIGHTS LAST 24 HOURS *(Include present flight)*	2
4. TIME AT CONTROLS THIS FLIGHT	1.1
5. TOTAL FLIGHT TIME ALL MODELS	2263

FLIGHT TIME	6. TOTAL	7. LAST 30	8. 60 DAYS	9. 90 DAYS
THIS MODEL	11.2	3.1	3.1	3.1

10. NO. GROUNDINGS PAST YEAR	0
11. NO. DAYS GROUNDED PAST YEAR	0

12. DATES AND TYPES OF PRIOR MISHAPS

None

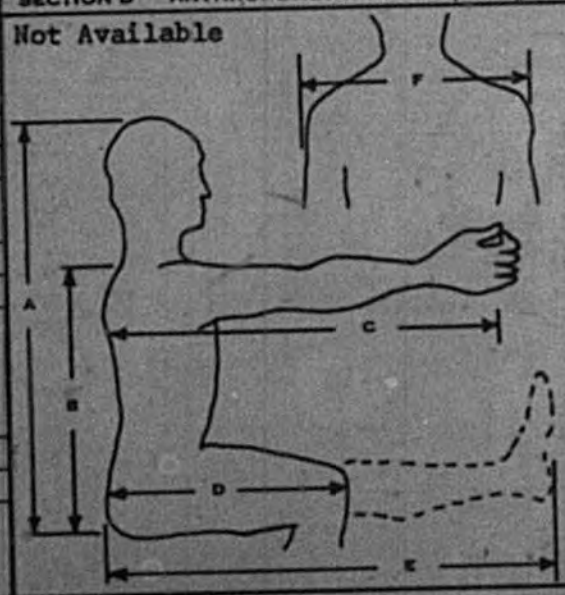
13. NO. HRS. IN A DUTY STATUS LAST 24 HRS.	9
14. DIRECTION FACING AT TIME OF MISHAP	Forward

15. LOCATION AT TIME OF MISHAP

Right Seat

SECTION D ANTHROPOMETRIC DATA (Compare with health record)

Not Available



AGE	
HEIGHT	IN.
WEIGHT	LB.
A. SITTING HEIGHT	IN.
B. TRUNK HEIGHT	IN.
C. FUNCTIONAL REACH	IN.
D. BUTTOCK - KNEE	IN.
E. LEG LENGTH	IN.
F. SHOULDER WIDTH (BIDELTOID)	IN.

16. LABORATORY TESTS AND RESULTS

SPECIMEN		TEST PERFORMED	RESULTS	SPECIMEN	TEST PERFORMED	RESULTS
BLOOD	1.			TISSUE: (CNS)		
Rt Aurick	2.	Chloride	106 MEQ	MUSCLE	Autopsy Report to Follow	
Lt Aurick	3.	Chloride	106 MEQ	VISCERA		
URINE				OTHER:		
G.I. CONTENT						

17. X-RAY RESULTS

MOS NO.	MODEL A/C	SUNO	IDENTIFICATION OF INDIVIDUAL
BWR-1-65A	C-2A	148147	C

NAME OF INDIVIDUAL

EADES, Thomas A.

OF-05F

☆ U. S. GOVERNMENT PRINTING OFFICE: 1963—681773

MEDICAL OFFICER'S REPORT OF A/C A[illegible]ENT, INCIDENT, OR GROUND ACCIDENT - PAC[illegible]

OPNAV REPORT 3750-7

OPNAV FORM 3750-8B (REV. 3-63)

SPECIAL HANDLING REQUIRED — *See OPNAVINST 3750.6E for instructions.*

SECTION E

INDIVIDUAL CHRONOLOGICAL DATA

SEE PAGE 8 PARA. 10 OF INSTRUCTION
TO BE COMPLETED ON PLANE COMMANDER, PILOT, CO-PILOT, OTHER INDIVIDUAL
IN CONTROL OF AIRCRAFT AT TIME OF MISHAP, AND/OR INDIVIDUAL CAUSING THE MISHAP

USE LOCAL TIME AND BRIEFLY RECORD ACTIVITY WITHIN EACH COLUMN

TIME	48 HOURS PRIOR TO MISHAP

TIME	36 Hours prior to mishap
	Flew three test flights C2A. Total time 2.6 Hrs.

TIME	24 Hours prior to mishap
	Secured for the day.
2000	Dinner with friends. 1.5 beers with 1 cherry herring after dinner.
2300	To bed at Motel

TIME	
0400	Awoke early and wrote letter.
0700	Arrived Peconic for Breakfast.
1230	Lunch
1500	Brief
1600	Aboard aircraft

ACCIDENT PHASE	
1726	Ditched

ESCAPE PHASE	
1727	Evidence of successful egress

SURVIVAL PHASE	
	In raft for undetermined period of time.
	Succumed to exposure prior to 1930

TIME OF RESCUE N/A

MOR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR-1-65A	C2A	148147	A[illegible]

NAME OF INDIVIDUAL
MC LEOD, Murdock M.

OP-05F

☆ U. S. GOVERNMENT PRINTING OFFICE: 1963—[illegible]

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE

OPNAV REPORT 3750-7

OPNAV FORM 3750-88 (REV. 3-63)

SPECIAL HANDLING REQUIRED — *See OPNAVINST 3750.6E for instructions.*

SECTION E

INDIVIDUAL CHRONOLOGICAL DATA

SEE PAGE 8 PARA. 10 OF INSTRUCTION

TO BE COMPLETED ON PLANE COMMANDER, PILOT, CO-PILOT, OTHER INDIVIDUAL IN CONTROL OF AIRCRAFT AT TIME OF MISHAP, AND/OR INDIVIDUAL CAUSING THE MISHAP

USE LOCAL TIME AND BRIEFLY RECORD ACTIVITY WITHIN EACH COLUMN

TIME	48 HOURS PRIOR TO MISHAP
	Unable to determine activities of the evening prior to the accident

TIME	
0700	Arrived Peconic for Breakfast.
0830	Flew C2A for total of 3.1 hours
1230	Lunch
1600	Aboard aircraft
ACCIDENT PHASE	
1726	Ditched
ESCAPE PHASE	
1727	Evidence of successful egress
SURVIVAL PHASE	Rapidly succumed to exposure. Time of death estimated prior to 1900.

TIME OF RESCUE N/A

MOR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR-1-65A	C2A	148147	C

NAME OF INDIVIDUAL

EADES, Thomas A.

OP-05F

☆ U. S. GOVERNMENT PRINTING OFFICE: 1963—685975

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PART

OPNAV REPORT 3750-7

OPNAV FORM 3750-6C (REV. 3-63)

SPECIAL HANDLING REQUIRED - *See OPNAVINST 3750.6E for instructions.*

SECTION F — PATHOLOGICAL DATA — *(Refer to Section F of Instructions.)*

1. INJURY CODE AND DISPOSITION: A

2. PRE-EXISTING PHYSICAL DEFECTS: None

3. UNCONSCIOUSNESS: [X] NO [ ] YES DURATION:

4. DROWNED: [ ] NA

5. ASPHYXIATED: NA [ ]

6. SHOCK: NA [ ] MILD [ ] MODERATE [ ] SEVERE

7. EXPOSURE: [ ] MILD [ ] MODERATE [X] SEVERE

8. EXTENT OF CARBONIZATION: NA

9. IF ADMITTED TO SICK LIST, GIVE DIAGNOSIS: NA

10. PLACE OF HOSPITALIZATION: NA

11. GROUNDED? IF YES, GIVE REASON: [ ] NO [ ] YES NA

12. DURATION *(See instruction)*: NA

13. PRIMARY CAUSE OF DEATH: Exposure

14. SECONDARY CAUSE OF DEATH: None

15. AUTOPSY CONDUCTED BY: [X] PATHOLOGIST, MEDICAL OFFICER PRESENT [ ] PATHOLOGIST, MEDICAL OFFICER NOT PRESENT [ ] MEDICAL OFFICER

16. [ ] PROTOCOL ATTACHED [X] WILL BE FORWARDED

17. WAS "AUTOPSY MANUAL, NAVMED P5055" USED? [ ] YES [X] NO

18. IF NO AUTOPSY CONDUCTED, GIVE REASON: NA

19. INJURIES	PHASE SUSTAINED A	E	S	R	CAUSE AND MECHANISM *(If unknown, theorize)*
1. Contusions both hands, index	X				Instrumented Yoke
finger, left thumb					
2. Abrasion skin of the left	X				Boom Mike
mandible					

20. REMARKS

Lack of Trauma as a cause of death and evidence of successful egress lead to the conclusion that cause of death was exposure to seawater 42°F. Correlating evidence in analysis.

BUR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	A

NAME OF INDIVIDUAL: McLEOD, Murdock M.

GP-387

☆ U. S. GOVERNMENT PRINTING OFFICE: 1963—685972

MEDICAL OFFICER'S REPORT OF A/C AC[illegible]ENT, INCIDENT, OR GROUND ACCIDENT - PAG[illegible]

OPNAV REPORT 3750-7

OPNAV FORM 3750-8C (REV. 3-63) SPECIAL HANDLING REQUIRED - *See OPNAVINST 3750.6E for instructions.*

SECTION F — **PATHOLOGICAL DATA** — *(Refer to Section F of instructions.)*

1. INJURY CODE AND DISPOSITION: A

2. PRE-EXISTING PHYSICAL DEFECTS: None

3. UNCONSCIOUSNESS: [X] NO [ ] YES DURATION:

4. DROWNED: [X]

5. ASPHYXIATED: NA [ ]

6. SHOCK: NA [ ] MILD [ ] MODERATE [ ] SEVERE

7. EXPOSURE: [ ] MILD [ ] MODERATE [X] SEVERE

8. EXTENT OF CARBONIZATION: NA

9. IF ADMITTED TO SICK LIST, GIVE DIAGNOSIS: NA

10. PLACE OF HOSPITALIZA[illegible]: NA

11. GROUNDED? IF YES, GIVE REASON: [ ] NO [ ] YES NA

12. DURATION *(See instruction)*: NA

13. PRIMARY CAUSE OF DEATH: Exposure

14. SECONDARY CAUSE OF DEATH: NA

15. AUTOPSY CONDUCTED BY: [X] PATHOLOGIST, MEDICAL OFFICER PRESENT [ ] PATHOLOGIST, MEDICAL OFFICER NOT PRESENT [ ] MEDICAL OFFICER

16. [ ] PROTOCOL ATTACHED [X] WILL BE FORWARDED

17. WAS "AUTOPSY MANUAL, NAVMED P5065" USED? [ ] YES [X] NO

18. IF NO AUTOPSY CONDUCTED, GIVE REASON: NA

19. INJURIES	PHASE SUSTAINED A	E	S	R	CAUSE AND MECHANISM *(If unknown, theorize)*
1. Contusions both	A				Flailing of legs against yoke and
Anterior Tibial Regions					console at time of impact
2. Abraided areas left upper arm.			S		Being held by Cdr. McLeod
Anterior and inner aspects					
3. Small laceration, tip of nose	A				Lip Mike
4. Small laceration right eyebrown					? - Perhaps during egress

20. REMARKS

Lack of Trauma as a cause of death and evidence of survival after ditching lead to the conclusion that exposure to seawater temperature 42°F was cause of death. Correlating evidence in analysis.

NOR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	C

NAME OF INDIVIDUAL: FADES, Thomas Allen

☆ U. S. GOVERNMENT PRINTING OFFICE: 1963—[illegible]

MEDICAL OFFICER'S REPORT OF A ACCIDENT, INCIDENT, OR GROUND ACC NT — PAGE 4A

OPNAV REPORT 3750-7

OPNAV FORM 3750-5D (REV. 3-63)

SPECIAL HANDLING REQUIRED. *See OPNAV INST 3750.6E for Instructions*

SECTION F (Continued)

SURFACE INJURIES

DESCRIBE AND SHOW GRAPHICALLY BY OUTLINING AND SHADING AFFECTED AREAS ALL LACERATIONS, ABRASIONS, CONTUSIONS, PUNCTURE WOUNDS, SPRAINS AND BURNS

RECORD ALL INJURIES NO MATTER HOW TRIVIAL, WHETHER PATIENT LIVED OR DIED

(b) (6)

[redacted]

DETAILS OF SKULL FRACTURES AND BRAIN INJURY. DESCRIBE AND SHOW GRAPHICALLY.

1. ALL FRACTURES, BY TYPE (*Simple, depressed, or indirect, etc.*) 2. SITES OF BRAIN LESIONS, IF ANY. 3. DISLOCATIONS OF MANDIBLE.

NONE

HOR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	A

NAME OF INDIVIDUAL

McLEOD, Murdock M.

OP-057

U. S. GOVERNMENT PRINTING OFFICE: 1963-

MEDICAL OFFICER'S REPORT OF A ACCIDENT, INCIDENT, OR GROUND ACC NT — PAGE 4A OPNAV REPORT 3750-7

OPNAV FORM 3750-8D (REV. 3-63) SPECIAL HANDLING REQUIRED. *See OPNAV INST 3750.6E for instructions*

SECTION F *(Continued)* SURFACE INJURIES

DESCRIBE AND SHOW GRAPHICALLY BY OUTLINING AND SHADING AFFECTED AREAS
ALL LACERATIONS, ABRASIONS, CONTUSIONS, PUNCTURE WOUNDS, SPRAINS AND BURNS

RECORD ALL INJURIES NO MATTER HOW TRIVIAL, WHETHER PATIENT LIVED OR DIED

(b) (5), (b) (6)

[redacted]

DETAILS OF SKULL FRACTURES AND BRAIN INJURY. DESCRIBE AND SHOW GRAPHICALLY.
1. ALL FRACTURES, BY TYPE *(Simple, depressed, or indirect, etc.)* 2. SITES OF BRAIN LESIONS, IF ANY. 3. DISLOCATIONS OF MANDIBLE.

NONE

MOR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	C

NAME OF INDIVIDUAL

EADES, Thomas A.

OP-OSF

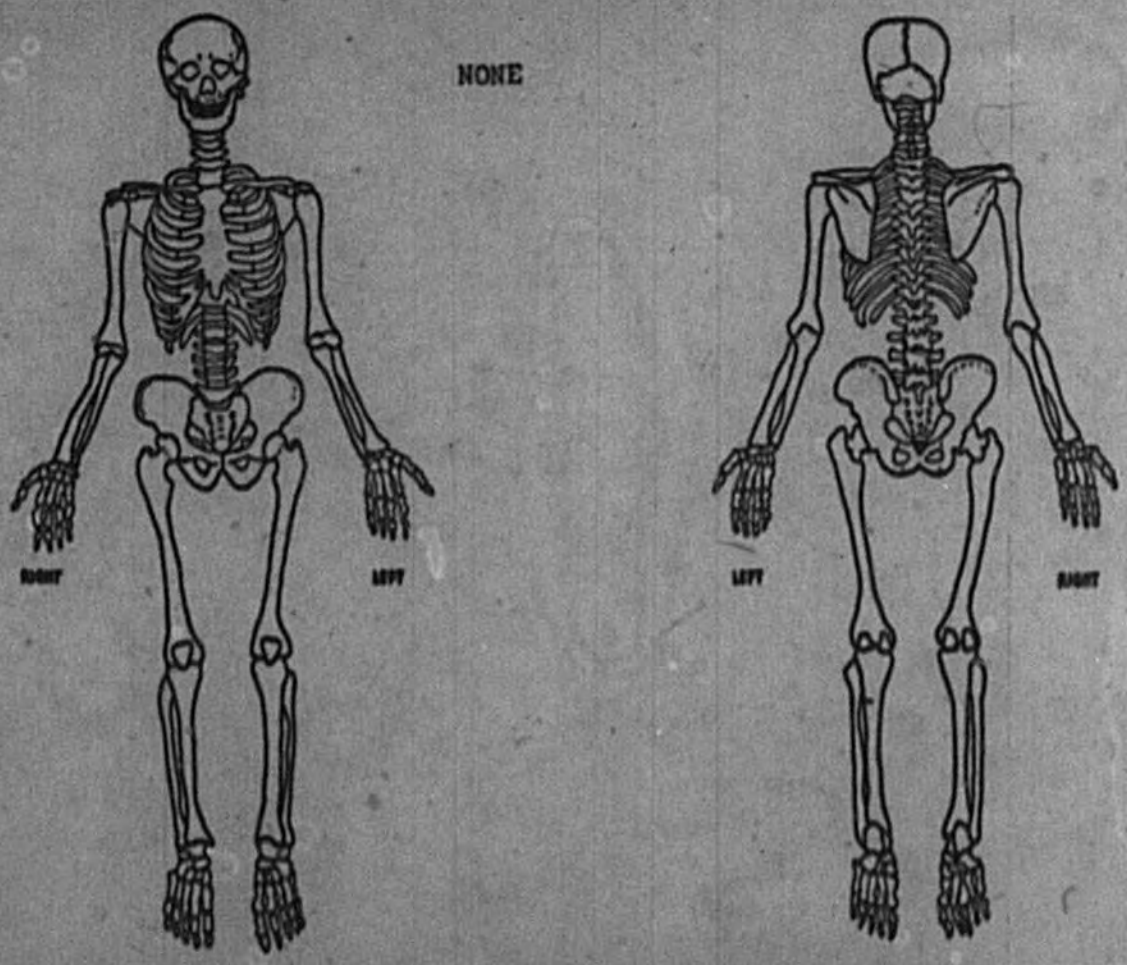
☆ U. S. GOVERNMENT PRINTING OFFICE: 1963-[illegible]

SECTION F (Continued)

SKELETAL INJURIES

DESCRIBE AND SHOW GRAPHICALLY BY OUTLINING ALL FRACTURES BY TYPE (Simple, compound, comminuted, etc.) AND DISLOCATIONS INDICATING DIRECTION OF DISPLACEMENT.

NONE



DESCRIBE AND SHOW GRAPHICALLY: 1. ALL FRACTURES OF SPINAL COLUMN (Simple, compressed, etc.) 2. DISLOCATION AND DIRECTION OF DISPLACEMENT. 3. SITES OF CORD DAMAGE, IF ANY.

DETAILS OF SPINAL INJURIES

NONE

BUR NO.	MODEL A/C	BURO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	A

NAME OF INDIVIDUAL

McLEOD, Murdock M.

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT - PAGE 2

OPNAV FORM 3750-8E (Rev. 3-63) SPECIAL HANDLING REQUIRED See OPNAVINST 3750-6E for Instructions.

OPNAV REPORT 3750-7

SECTION F (Continued)

SKELETAL INJURIES

DESCRIBE AND SHOW GRAPHICALLY BY OUTLINING ALL FRACTURES BY TYPE (Simple, compound, comminuted, etc.) AND DISLOCATIONS INDICATING DIRECTION OF DISPLACEMENT.

(b) (6)

[redacted]

DESCRIBE AND SHOW GRAPHICALLY: 1. ALL FRACTURES OF SPINAL COLUMN (Simple, compressed, etc.) 2. DISLOCATION AND DIRECTION OF DISPLACEMENT. 3. SITES OF CORD DAMAGE, IF ANY.

DETAILS OF SPINAL INJURIES

(b) (6)

[redacted]

BUN NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	C

NAME OF INDIVIDUAL

FADES, Thomas A.

SECTION G — ESCAPE, PERSONAL AND SURVIVAL EQUIPMENT

LIST AND CODE IN ACCORDANCE WITH SECTION G OF INSTRUCTION; PHASE CODES: A-ACCIDENT/MISHAP E-ESCAPE/EGRESS PHASE S-SURVIVAL R-RESCUE PHASE

1. EQUIPMENT DESCRIPTION INCLUDING SPECIFIC MODEL DESIGNATION	2. MODIFICATION	3. REQUIRED	4. AVAILABLE	5. NEED	6. USED	7. FAILED	8. REMARKS (Explain failures, loss, and/or difficulty encountered. Use additional 8x10½ plain paper if needed.)
Helmet APH-5		Yes	AES	AE	AES	No	Quick Donning Anti Exposure suits were available in the aircraft. However, in a sudden ditching situation there was no time to get them.
Summer Flying Suit		Yes	AES	AES	AES	No-	
Flight Boots		Yes	AES	AES	AES	No	
Waffle Weave Underwear		No	AES	AES	AES	No	
Summer Flying Gloves		No	AES	AES	AES	No	
GFE Quick Donning Anti Exposure Suit		Yes	A	AES	No		
GFE Parchute Harness		Yes	A	No	No		
MK-2 Lifevest		Yes	AES	AES	AES	No	
Seat Pan and PK-2 Raft	See Remarks	Yes	AES	AES	AES	No	

SECTION H — NARRATIVE OF ESCAPE/EGRESS, SURVIVAL AND RESCUE PHASES

A presumed sequence of events dealing with escape, egress and survival is reconstructed in the analysis.

MOR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	A

NAME OF INDIVIDUAL

McLEOD, Murdock M.

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 5 OPNAV REPORT 3750-7

OPNAV FORM 3750-8F (REV. 3-63) SPECIAL HANDLING REQUIRED. *See OPNAV INST 3750.6E for instructions*

SECTION G — ESCAPE, PERSONAL AND SURVIVAL EQUIPMENT

LIST AND CODE IN ACCORDANCE WITH SECTION G OF INSTRUCTION: PHASE CODES: A-ACCIDENT/MISHAP S-SURVIVAL E-ESCAPE/EGRESS PHASE R-RESCUE PHASE

1. EQUIPMENT DESCRIPTION INCLUDING SPECIFIC MODEL DESIGNATION	2. MODIFICATION	3. REQUIRED	4. AVAILABLE	5. NEED	6. USED	7. FAILED	8. REMARKS (Explain failures, loss, and/or difficulty encountered. Use additional 8x10½ plain paper if needed.)
Helmet APH-5		Yes	AES	AES	AES	No	Quick Donning Anti Exposure suit
Summer Flying Suit		Yes	AES	AES	AES	No	was available. However in a
Cotton Underwear		N/A	AES	AES	AES	No	sudden ditching situation it was
Boondockers		Yes	AES	AES	AES	No	not possible to utilize it.
Survival Knife		Yes	AES				
GFE Quick Donning Anti Exposure Suit		Yes	A	AES	No		
MK-2 Life Vest		Yes	AES	AES	AES	No	
Seat Pan and PK-2 Raft Assembly		Yes	AE	AES	No	No	

SECTION H — NARRATIVE OF ESCAPE/EGRESS, SURVIVAL AND RESCUE PHASES

A presumed sequence of events dealing with escape, egress, and survival is reconstructed in the analysis.

MOR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	C

NAME OF INDIVIDUAL

EADES, Thomas A.

OP-007

☆ U. S. GOVERNMENT PRINTING OFFICE: 1963-606329

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 6 OPNAV REPORT 3750-7

OPNAV FORM 3750-66 (REV. 3-63) SPECIAL HANDLING REQUIRED. *See OPNAV INST 3750.6E for Instructions*

SECTION I DETAILS OF ESCAPE/EGRESS/SURVIVAL PHASES REFER TO SECTION I OF INSTRUCTIONS

1. TOPOGRAPHY OF INDIVIDUAL'S LANDING SITE

[X] WATER [ ] LAND [ ] OTHER

2. TYPE OF EGRESS Presumably opened overhead hatch manually and climbed out.

[ ] EJECTION [ ] BAILOUT [ ] UNDERWATER [ ] NORMAL [X] OTHER *(State type)*

S	E		REMARKS
		3. NOT ATTEMPTED	
		4. ATTEMPTED	
	X	5. ACCOMPLISHED	
		6. THRU CANOPY	
YES	NO	EGRESS DIFFICULTIES	IF YES, EXPLAIN DIFFICULTIES
		7. PRIOR TO EGRESS	Unknown presumed none
		8. DURING EGRESS	Unknown presumed none
		9. SUBSEQUENT TO EGRESS	Unknown presumed none

10. GIVE TYPE AND MODEL OF EJECTION SEAT USED: NA

11. METHOD OF FIRING SEAT NA [ ] PRIMARY [ ] SECONDARY [ ] OTHER

12. SEQUENCE OF EJECTION: NA

13. POSITION OF SEAT ON EJECTION NA [ ] UP [ ] DOWN [ ] FORWARD [ ] AFT [ ] OTHER

14. ATTITUDE OR MANEUVER OF A/C AT EXIT: Presumed wings level

15. AIRSPEED: EST 100 M[illegible].

16. ALTITUDE AT TIME OF EXIT (FEET) Ditching ABOVE SEA LEVEL _____ ABOVE TOPOGRAPHY _____

17. ALTITUDE OF PARACHUTE OPENING: NA

18. WEIGHT: 200 lbs.

19. TIME IN WATER: 40 Hours

20. TIME IN RAFT: Unknown

21. WIND VELOCITY: 10 Knots

22. WAVE HEIGHT: 2-4'

23. WAVE INTERVAL: 6-8 feet

24. AIR TEMPERATURE: 61°

25. WATER TEMPERATURE: 38° to 44°

26. VISIBILITY: 10 Miles

27. ALERTING FACTORS: Radio voice call

28. MEANS OF LOCATING ACCIDENT SITE: Debris

29. MEANS OF LOCATING SURVIVOR: Air Search - Visual Sighting

30. NA

31. Cold Water

32. Not Maintained - died of Exposure

33. NA

34. NA

35. NA

36. DID INDIVIDUAL DEPART FROM LANDING SITE? *(If Yes, Explain reason and sequence up to rescue)*

[X] NO [ ] YES

SECTION J TRAINING FACTORS

1. DATE OF LAST TRAINING

LPC 9-1-64 EJECTION TOWER 9-1-64 EJECTION SEAT 9-1-64 SURVIVAL 7-3-62

2. DID THE LACK OF TRAINING AND/OR EXPERIENCE PLAY A PART IN ANY PHASE OF THIS MISHAP? *(If yes, explain)*

[ ] NO [X] YES Perhaps if Cdr. McLeod left the raft in an attempt to swim toward land.

NOR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	A

NAME OF INDIVIDUAL: McLEOD, Murdock M.

OP-GSF ☆ U. S. GOVERNMENT PRINTING OFFICE: 1963-686321

MEDICAL OFFICER'S REPORT OF A/C ACCIDENT, INCIDENT, OR GROUND ACCIDENT — PAGE 6 OPNAV REPORT 3750-7

OPNAV FORM 3750-6G (REV. 2-63) SPECIAL HANDLING REQUIRED. *See OPNAV INST 3750.6E for instructions*

SECTION I DETAILS OF ESCAPE/EGRESS/SURVIVAL PHASES REFER TO SECTION I OF INSTRUCTIONS

1. TOPOGRAPHY OF INDIVIDUAL'S LANDING SITE

[X] WATER [ ] LAND [ ] OTHER

2. TYPE OF EGRESS Presumably opened overhead hatch manually and climbed out

[ ] EJECTION [ ] BAILOUT [ ] UNDERWATER [ ] NORMAL [X] OTHER *(State type)*

S	E		REMARKS
		3. NOT ATTEMPTED	
		4. ATTEMPTED	
	X	5. ACCOMPLISHED	
		6. THRU CANOPY	
YES	NO	EGRESS DIFFICULTIES	IF YES, EXPLAIN DIFFICULTIES
		7. PRIOR TO EGRESS	Unknown presumed none
		8. DURING EGRESS	Unknown presumed none
		9. SUBSEQUENT TO EGRESS	Unknown presumed none

10. GIVE TYPE AND MODEL OF EJECTION SEAT USED: NA

11. METHOD OF FIRING SEAT: NA [ ] PRIMARY [ ] SECONDARY [ ] OTHER

12. SEQUENCE OF EJECTION: NA

13. POSITION OF SEAT ON EJECTION: NA [ ] UP [ ] DOWN [ ] FORWARD [ ] AFT [ ] OTHER

14. ATTITUDE OR MANEUVER OF A/C AT EXIT: Presumed wings level

15. AIRSPEED: EST. 100 Knts.

16. ALTITUDE AT TIME OF EXIT (FEET): Ditched ABOVE SEA LEVEL _____ ABOVE TOPOGRAPHY _____

17. ALTITUDE OF PARACHUTE OPENING: NA

18. WEIGHT: 180 Lbs.

19. TIME IN WATER: 40 Hours

20. TIME IN RAFT: Unknown

21. WIND VELOCITY: 10 Knots

22. WAVE HEIGHT: 2-4'

23. WAVE INTERVAL: 6-8'

24. AIR TEMPERATURE: 61°

25. WATER TEMPERATURE: 42°

26. VISIBILITY: 10 Miles

27. ALERTING FACTORS: Radio voice call

28. MEANS OF LOCATING ACCIDENT SITE: Debris

29. MEANS OF LOCATING SURVIVOR: Air Search - Visual Sighting

30. NA

31. Cold Water

32. Not Maintained - died of exposure

33. NA

34. NA

35. NA

36. DID INDIVIDUAL DEPART FROM LANDING SITE? *(If Yes, Explain reason and sequence up to rescue)*

[X] NO [ ] YES

SECTION J TRAINING FACTORS

1. DATE OF LAST TRAINING

LPC 10-1-63 EJECTION TOWER 10-1-63 EJECTION SEAT 10-1-63 SURVIVAL 5-14-62

2. DID THE LACK OF TRAINING AND/OR EXPERIENCE PLAY A PART IN ANY PHASE OF THIS MISHAP? *(If yes, explain)*

[X] NO [ ] YES

NOR NO.	MODEL A/C	BUNO	IDENTIFICATION OF INDIVIDUAL
BWR 1-65A	C-2A	148147	C

NAME OF INDIVIDUAL: FADEG, Thomas A.

OF-017

☆ U. S. GOVERNMENT PRINTING OFFICE: 1965-[illegible]

SUMMARY OF AERO MEDICAL INFORMATION

1. LCDR Eades was found with:

   a. Mae West inflated, both CO-2 cartridges fired.
   b. Mae West light off but operable.
   c. One packet of dye marker partially opened.
   d. Helmet on and completely intact.
   e. Summer flying suit completely intact.
   f. Boondockers on and intact.
   g. Cotton underwear.

(b) (6)

[redacted]

6. CDR McLeod was found with:

   a. Mae West inflated, both CO-2 cartridges fired.
   b. Mae West light inoperable secondary to sea water leakage.
   c. Several extra packets of dye marker in his life vest. These were not crumpled but fresh and flattened and presumably came from a PK-2 raft package. One flare was missing.
   d. Helmet on and completely intact.
   e. Summer flying suit completely intact.
   f. Flight boots on and intact. Tied into his boot strings was a 50 foot length of nylon cord which is found in a PK-2 raft pack (see enclosure 3)
   g. Waffle weave underwear completely intact.

Summary of Aero Medical Information (continued)

(b) (6)

[redacted]

ANALYSIS

The flight received taxi clearance at 1609Q and was airborne at 1618Q. The NPE team and AAR board estimated that the inflight instrument check would have been completed at 1622Q - 1624Q. They also estimated that the longitudinal trim changes would have been completed by 1639 and there was a position report at 1642. The position report placed the aircraft one mile north of Block Island. The board estimated that the glide configuration longitudinal stability would have been completed at approximately 1710. At 1709 a transmission was received "Three miles North of Montauk - simulating signle engine." The fact that position reports would normally be given between phases correlates with the above analysis. See Enclosure 13 .

The brief for single engine work was to simulate it at 10,000' to get the feel of things then descend to 5,000', feather one engine and drop gear and flaps to take-off configuration. At 1726 the following transmission was received "Patuxent Tower, correction, Peconic Tower, we've lost both engines, don't know whether you read or not but emergency IFF" the Tower asked for position, "We're approximately on your 2--, correction, about the 090 radial and we're off Montauk. I see a small island, as a matter of fact two small ones. Very, very small both Islands" Transmission had become progressively weaker and at this point faded out entirely.

The ditching was apparently successful. (b) (5), (b) (6)

(b) (5), (b) (6)

[redacted]

Analysis (continued)

(b) (5), (b) (6)

[redacted]

One seat pan was recovered with the PK-2 raft packet intact, another with the raft packet missing. CDR McLeod had several excess packets of dye marker in his life vest which had been taken from a PK-2 raft packet. He also had the 50 foot length of nylon cord from the raft tied into his boot string (see Encl 3). (b) (5) [redacted]

(b) (5)

(b) (5)

(b) (5), (b) (6)

[redacted]

(b) (5), (b) (6)

[redacted]

CONCLUSIONS

I. The malfunction leading to engine failure is unknown pending recovery of the aircraft.

II. There were no established human factors or pilot errors contributing to the cause of the accident. Possibly poor judgment was involved in feathering one engine over water. (If in fact one was feathered)

Conclusions (continued)

III. The ditching was successful followed by successful egress.

IV. Both pilots succumbed rapidly to exposure to cold seawater.

V. The wearing of anti exposure suits is not required in this type aircraft. The entire flight was conducted within sight of land.

VI. An operable DME would have materially enhanced chances of early rescue and survival.

VII. Lack of a complete complement of safety and survival gear in the seat pan, (i.e. seek kits, pyrotechnics, radar reflector, radio homing beacon, etc.) may be implicated in the failure to effect rescue. BWR at this facility had made attempts to procure these items but had been told that they would be supplied to the aircraft at squadron level. The end result was that production and test aircraft were being flown for acceptance and test flights without adequate survival gear.

RECOMMENDATIONS

(b) (5)

[redacted]

II. It is recommended that all Navy aircraft have aboard and accessible a full complement of safety and survival gear. This includes, R&D, test, acceptance, and ferry aircraft.

(b) (6) [redacted]

ENCLOSURES

(1) CDR McLeod's Helmet

(2) LCDR Eades Helmet

(3) 50' length of nylon cord from PK-2 raft packet tied into Cdr McLeod's boot string

(4) (35 mm color) Bruises on Cdr McLeod's thumbs and index fingers

(5) (35 mm color) Bruises on LCdr Eades shins

(6) (35mm color) abraded skin on LCdr Eades left upper arm

(7) Instrumented yoke Left Seat C2-A

(8) Statement of Lt. (b) (6) [redacted] USN

(9) Statement of Lt. (b) (6) [redacted] USCG

(10) Statement of SK-2 (b) (6) [redacted] USCG

(11) Statement of EN-3 (b) (6) [redacted] USCG

(12) Statement of Mr. (b) (6) [redacted] Project Engineer

(13) Map of Area

NAVY

NA VY

Ariel (3)

PHOTOGRAPHS INCLUDED ONLY WITH COPY SUBMITTED TO SAFETY CENTER

#4

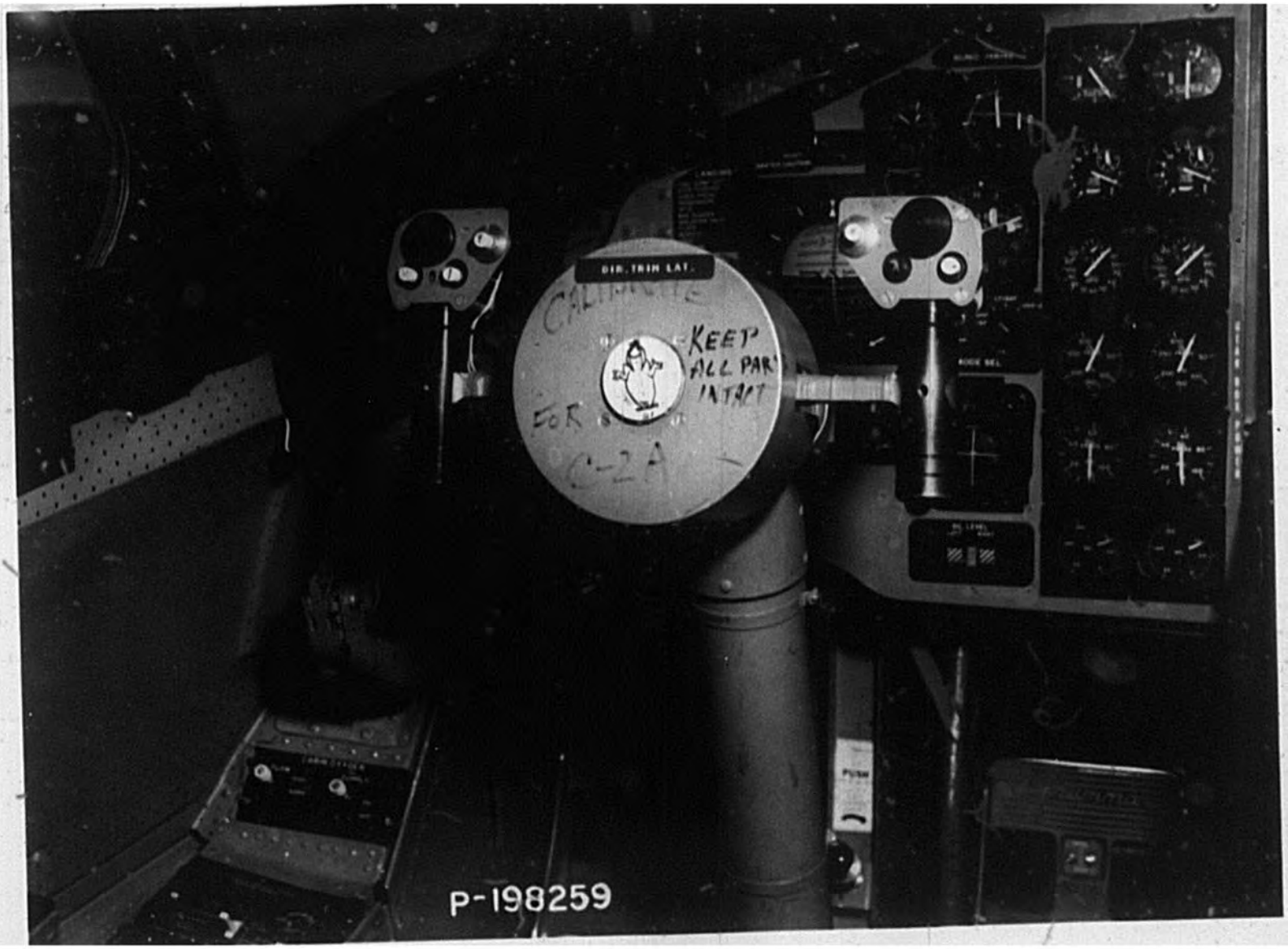
PHOTOGRAPHS MISSING WHEN FILMED. 5-26-67 dwe

#4

#5

PHOTOGRAPHS Missing When filmed
5-26-67 — SWE

#6


DIR. TRIM LAT.
CALIBRATE
KEEP
ALL PARTS
INTACT
FOR
C-2A
P-198259

Statement of Lt. (b) (6) [redacted] concerning pre-flight briefing of NPE Flight 15.

I briefed CDR McLeod on the test method to obtain configuration WO static longitudinal stability with respect to angle of attack. Particular emphasis was placed on having the exact indicated airspeeds and exact altitude at the point of taking data. The detailed test method briefed was as follows: Starting at 900 to 1000 ft. add military power (gear down, flaps full down) and trim the airplane during a climb to 2000 ft. Try to get as close as possible to the test speed but plan the first run as a dry run to establish trim, not to record data. Without changing trim descend to 900 to 1000 ft. and again add military power. During the climb, fine trim to get test speed at 2000 ft. At this point record airspeed, altitude, elevator trim setting, sensitive angle of attack, production angle of attack and correlation time. Photo panel and magnetic tape should be run in addition to recording cockpit data. This test was to have been repeated at three speeds, 94, 104, and 112.5 KIAS. Maximum AOA on any of the runs would have been approximately 20 units. This test had been performed at gross weights 6000 and 12,000 lb. heavier using the same airspeeds.

Encl (8)

TREASURY DEPARTMENT
UNITED STATES COAST GUARD

ADDRESS REPLY TO:
Commanding Officer
USCGC VIGILANT (WPC-617)
State Pier
New Bedford, Massachusetts

2 May 1965

From: LT (b) (6) [redacted] (6113) USCG, USCGC VIGILANT (WPC-617)
To: Whom It May Concern

Subj: Narrative Account of Receipt of Naval Flyers Bodies on 1 May 1965

1. On 1 May 1965, when the helicopter had notified the vessel that a body had been found floating in the water, the Captain notified me to take charge of the bodies, inventory their belongings and place the bodies in the vessels chill box. The first body was brought alongside the vessel by a Coast Guard 40 footer. I observed that the body was in a wire litter covered with a grey blanket. I ordered a canvas drop cloth be dropped into the 40 footer along with one of the ships wire litters. The body was transferred from the 40 footers wire litter to the vessels wire litter and hoisted onto the Main Deck Port side.

2. A thorough examination (superficial) was conducted by myself and (b) (6) [redacted] SK2. The following observations were made:

a. The name of the flyer was found to be Allen Eades, LT, USN, this information was taken from the Lieutenants name tags that snaps to his flight suit. (b) (5) [redacted]

(b) (5) [redacted]

c. The Lieutenants Maywest was inflated and covered with dye marker, the dye marker covered the lifejacket and the upper part of the body. The pockets of the lifejacket were not open.

d. The following effects were removed from the body:

A wallet with cash and credit cards, 1 ID card, 1 suitcase key, assorted cards, 1 certificate of Boat Number, 1 name tag "T. A. Eades, LT, USN", 1 ID bracelet "Allen Eades", 4 pens, 1 pencil, 2 dog tags, 1 pair of gloves, 1 pack of cigarettes.

e. The Lieutenant wore a class ring which was left on the body. The two dog tags were found in the upper left chest pocket on a chain.

f. It was noted that the Lieutenant had a small puncture type wound over his left eye. The crash helmet was intact and undamaged. The Lieutenants flight suit was not torn or damaged in any way. The body showed no signs of burns or cuts other than the one mentioned above. The body was clothed in the orange flight suit shorts and undershirt, white socks and brown high top shoes.

(b) (6)

[redacted]

h. The bodywas wrapped in a white canvas, layed in a stretcher, strapped in, with lifejackets on either side of the head to help support it. The flight helmet was not removed at any time, nor was the radio equipment attached thereto. The body was carried below, and placed in the 30 degree reefer box in an upright position.

3. The second body was sighted by the helicopter as was the first, and picked up by the 40 footer, and delivered to the vessel. The operator of the 40 foot Coast Guard boat advised me that they had deflated the Maywest on the second body to facilitate placing him in the litter and covering him. Both bodies had been removed from the water by the crew of the 40 footer, floating face down. The second body was brought on board after being transferred on the 40 footer into a ships plastic litter. This second body was examined, as was the first, by myself and HC [redacted] SK2. HC [redacted] SK2 is presently performing the duties of Hospitalman aboard this vessel because of the recent discharge of the assigned Hospitalman [redacted] HM1. HC [redacted] has taken a Hospitalman Third Coast Guard Course and is presently awaiting assignment to Hospital Corpsman School.

4. The following observations were made while examining the second flyers body:

a. It was determined from an ID card in the wallet that this was the body of CDR M. MC CLEOD, USN.

b. The Commanders Maywest was removed by cutting the underarm straps, as was the Lieutenants. There was no dye marker visible on the Commanders Maywest. The lifejacket pocket was opened on both sides one pocket had a flare protruding from it. The flare was included with the personal effects.

(b) (6)

[redacted]

(b) (6)

[redacted] The right hand was gloved, the left hand was bare. The glove was removed and placed with the personal effects. The flight helmet was intact and undamaged as was the flight suit and shoes.

c. The Commander was clothed identically as the Lieutenant.

(b) (6) [redacted]

e. The following articles were removed from the body and inventoried:

Wallet. with cash and assorted credit cards, 1 hotel key, 1 set Hertz Rent-a-car key, 1 Enicar wrist watch, 1 glove, 1 screwdriver, 1 handerchief, Maywest.

f. The wrist watch that was removed had stopped at 5 minutes of 7. The left ring finger had a class ring on it which was not removed.

5. The body was wrapped and secured in a fiberglass litter and removed to the 30 degree reefer box, and placed next to the Lieutenants body, in an upright position.

(b) (5) [redacted]

(b) (5), (b) (6) [redacted] The vessel arrived in New Bedford as per ETA of 1619. At approximately 1830 a Navy half ton panel truck arrived on the dock. I greeted the driver (b) (6) [redacted] Till, USN who was accompanied by another 3rd Class Petty Officer. I was informed by the driver, after I had inspected the inadequate type of vehicle that had been provided, "Nobody wanted the bodies". The truck was equipped with one brown rubber bag used by undertakers to cover a body. The truck was too short to accommodate both bodies, without bending the bodies. The truck was not equipped with any other equipment to transport the two flyers bodies. The driver could offer no explanation other than saying that it was a sad way to transport the remains.

7. A channel 12 TV reporter met the ship on its arrival in New Bedford and had taken extensive footage on a 16 milimeter camera of the ships arrival. The TV reporter also took extensive footage of the removal of the bodies from the vessel to the truck. The Commanders body was transferred from the plastic litter to the rubber bag provided by the Navy. The body was placed in the bag with the plastic and canvas covering remaining. The Lieutenant was left in the wire litter because no equipment had been provided to cover the body in the truck. The body of the Commander was laid kiddie corner on the bed of the truck and the body of the Lieutenant was laid in the opposite direction, kiddie corner across two side seats.

The wire litter was lashed to the side of the truck to prevent the litter from falling on top of the body on the deck. The deck area in the truck was not wide enough to accommodate both bodies.

8. The driver was asked by myself why the Navy had sent this type of vehicle and not an ambulance. The driver informed me that the Hospital had told them that they had only one ambulance and that was on emergency call.

9. In conclusion, the both flyers bodies were carefully and well cared for on board the VIGILANT. The personal effects were inventoried by myself, recorded by (b) (6) YN2, deposited in seperate cardboard boxes and sealed. It (b) (5) [redacted] (b) (5) [redacted] The personal belongings of the two flyers was delivered to (b) (6) [redacted] TM1, USN, the truck driver who receipted for same.

(b) (6) [redacted]

Lieutenant, U. S. Coast Guard
USCGC VIGILANT (WPC-617)

Encl. (9)

TREASURY DEPARTMENT
UNITED STATES COAST GUARD

ADDRESS REPLY TO:
Commanding Officer
USCGC VIGILANT (WPC-617)
State Pier
New Bedford, Massachusetts

2 May 1965

From: (b) (6) [redacted] (340-055) SK2, USCG
To: Whom it May Concern

Subj: Narrative Account of Receipt of Naval Flyers Bodies on 1 May 1965

1. On 1 May 1965, Saturday afternoon, the body of LT Allen Eades, USN was brought aboard the Coast Guard Cutter VIGILANT on the port side. The following is a statement of what I did and saw.

2. Lieutenant Eades was fully dressed with flight helmet and inflated Maywest on. We transferred the Lieutenant from the wire litter of the CG 40 foot boat to one of the ships wire litters. LT (b) (6) [redacted] USCG and myself started checking over Lieutenant Eades. The first thing I tried to do was take the class ring off his finger, but could not get it off. Then we took off his Maywest. I did not check the Maywest very close but did notice some green dye on it. At this time I noticed some drops of blood on the deck. I looked at the Lieutenants head and saw the right side of his face and neck was discolored.

3. Then I saw the Lieutenant had a small cut above his right eye. I then started checking the pockets on the Lieutenants flight suit. I took the previously listed items of personal effects from LT Eades pockets and gave them to Mr. (b) (6) [redacted] (b) (6) [redacted] (b) (6) [redacted] position and would [redacted] The body was then wrapped in two pieces of canvas in the ships litter. The body was completely covered. Then the body was put in the 30 degree reefer box for transportation to New Bedford, Massachusetts. The shore patrol arrived about 2 hours after the ship arrived with a paddy wagon with one bag for one body. We then transferred the body ashore to the SP's.

4. A short time later after the discovery of the first body the helicopter sighted another body that was brought to the ship by the same 40 foot CG boat. After placing the body on the ships plastic litter, it was then brought aboard on the port side, Main Deck. On investigating, the body was found to be that of Commande McCleod. The body was fully dressed in flight suit, helmet and Maywest. His Maywest was deflated. The men on the CG 40 footer told us they had deflated the Maywest in order to cover the body.

5. The first thing I noticed was a glove on the right hand which I took off and gave to Mr. (b) (6) Then Lt (b) (6) and myself took off the Haywest, I did not notice any dye of any color on the Haywest. I did notice one flare almost out of the pocket, which I took out and gave to Mr. (b) (6) along with some small yellow packets. (b) (6) [redacted] (b) (6) [redacted] (b) (6) [redacted] I then started going down his body checking for personal effects in the pockets of the flight suit. The body was hard. I removed the previously listed items from the pockets of the Commanders flight suit. He had on a class ring on his left index finger which was not removed. CDR McCloud was dressed the same as the Lieutenant. We then wrapped the Commande in mattress covers and then covered him with a piece of black plastic, we then,placed the Commanders body in the same reefer with the Lieutenant for transporting to New Badford, Massachusetts. At approximately 1845 the two bodies were transfered to Navy Shore Patrol. The Commander was placed into the brown bag that the shore patrol had brought with them for transporting to Newport Naval Base, Newport, R. I. The paddy wagon was too short and too narrow to lay both bodies side by side on the deck. We laid the Commanders body length wise on the deck of the paddy wagon and had to leave the Lieutenant in the wire litter and plawed him cross ways on the seats so that they would both fit in the back of the truck. (b) (6) [redacted]

Encl (10)

The first body we retrieved was completely intact, with uniform and helmet, green dye marker was present on the body, but not in surrounding water. The arms of the body was outstretched.

The second body the larger of the two, was also intact, with all equipment such as dye marker, and flares unused. to my observation, some gear came adrift while retrieving the body. All this gear was turned over to On Scene Com. with body.

(b) (6) [redacted]

Cn 3

En 3

(b) (6) [redacted]

(b) (6) [redacted]

Encl (11)

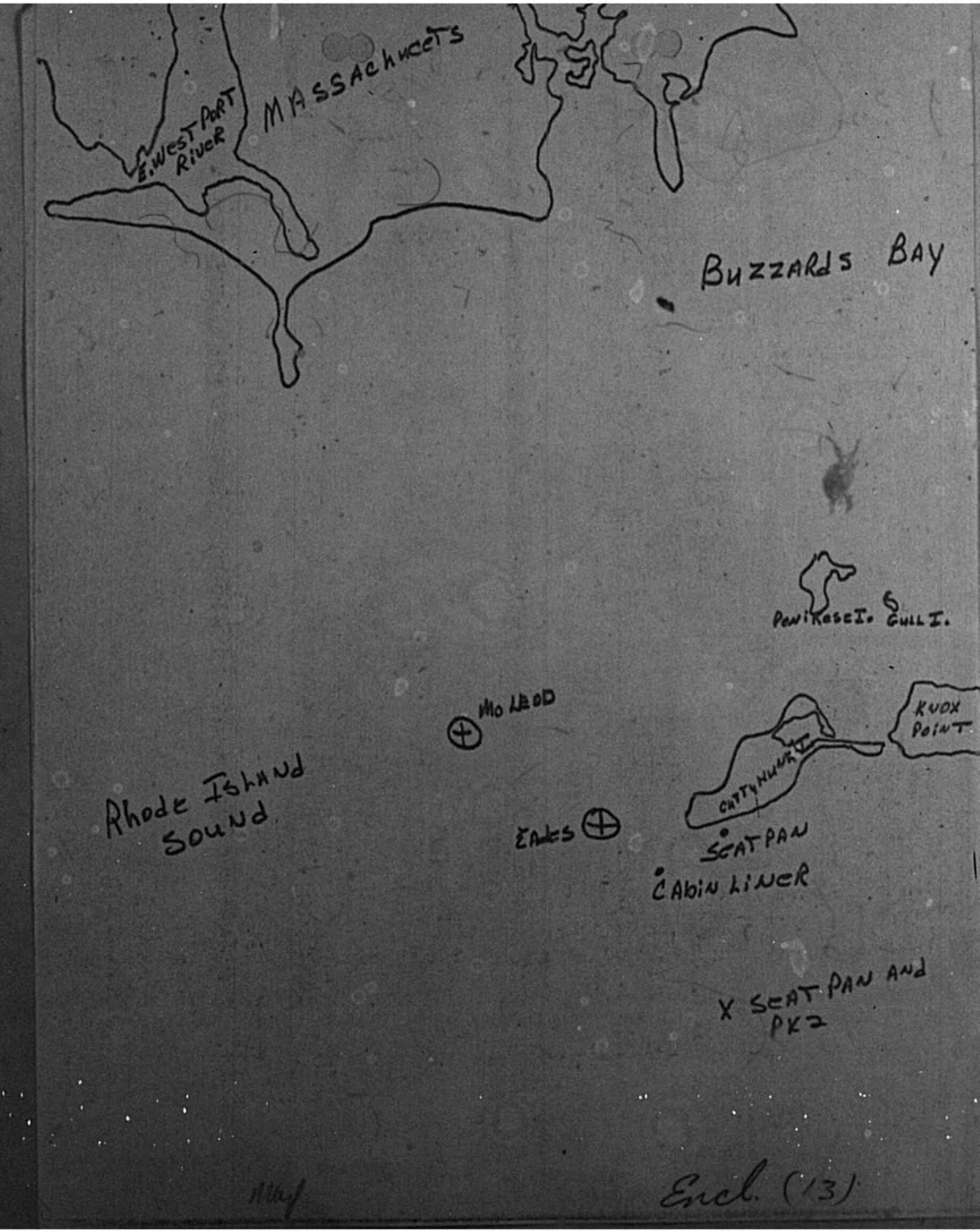
(b) (5), (b) (6)

(b) (5), (b) (6)

(b) (5), (b) (6)

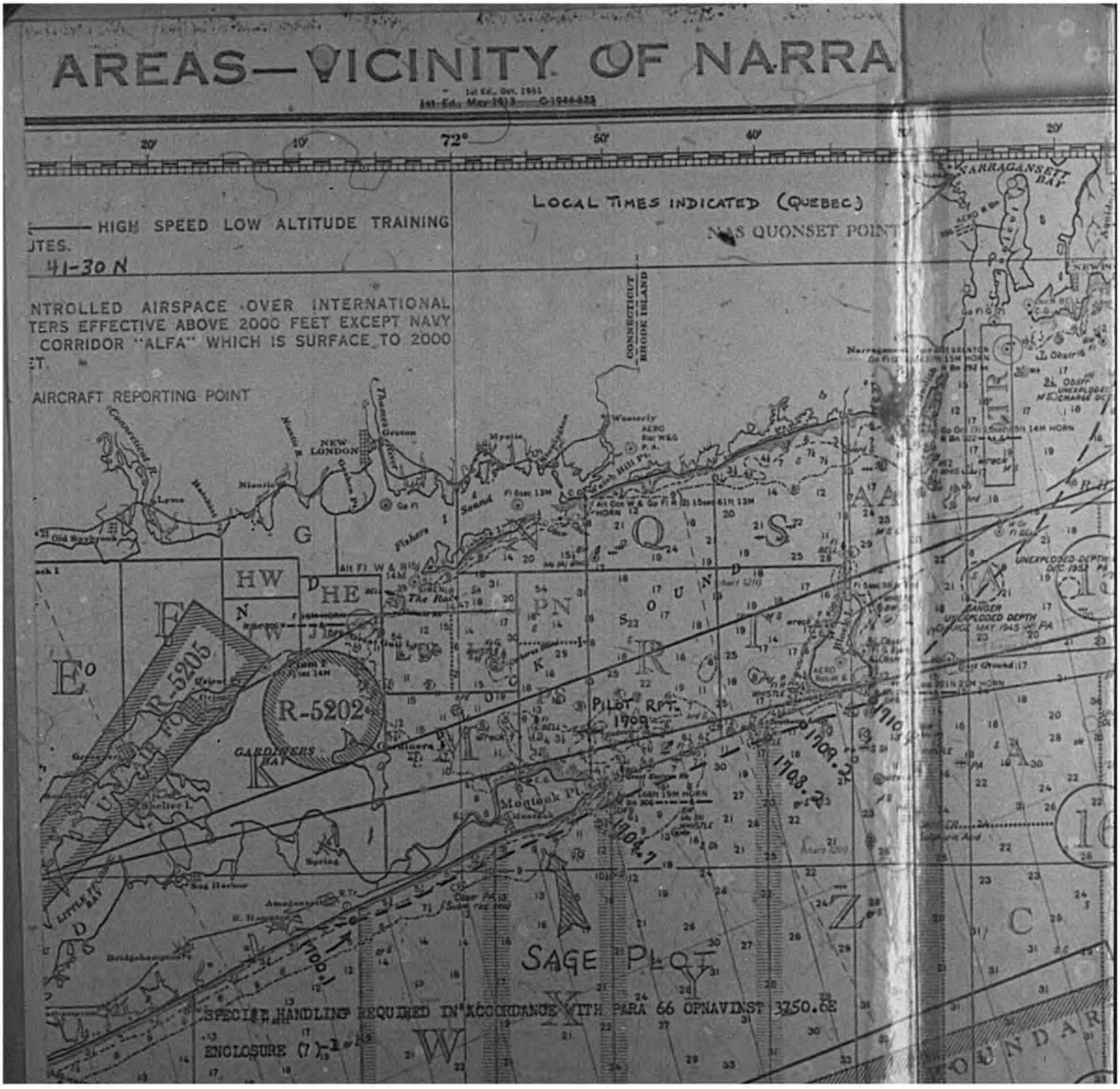
(b) (5), (b) (6)

(b) (5), (b) (6)


MASSACHUSETTS
E. WEST PORT RIVER
BUZZARDS BAY
PONIKESE I. & GULL I.
MCLEOD
KNOX POINT
CUTTYHUNK I.
Rhode Island Sound
EALES
SEAT PAN
CABIN LINER
X SEAT PAN AND PK2

Map

Encl. (13)


AREAS—VICINITY OF NARRA
1st Ed., Oct. 1951
1st Ed., May 1913 C-1944-623
LOCAL TIMES INDICATED (QUEBEC)
HIGH SPEED LOW ALTITUDE TRAINING
UTES.
41-30 N
NTROLLED AIRSPACE OVER INTERNATIONAL
TERS EFFECTIVE ABOVE 2000 FEET EXCEPT NAVY
CORRIDOR "ALFA" WHICH IS SURFACE TO 2000
ET.
AIRCRAFT REPORTING POINT
NAS QUONSET POINT
NARRAGANSETT BAY
CONNECTICUT
RHODE ISLAND
NEW LONDON
Groton
Mystic
Westerly
Fishers I Sound
The Race
Montauk Pt.
GARDINERS BAY
R-5205
R-5202
PILOT RPT. 1709
1709.2
1708.2
1704.7
1700.1
SAGE PLOT
SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E
ENCLOSURE (7)-1

NARRA
INSET 50' (JOINS CHART 1107) 40'
71°
INDICATED (QUEBEC)
NAS QUONSET POINT
NARRAGANSETT BAY
NEWPORT
FADE POINT
1718.4
085
RHODE ISLAND SOUND
UNEXPLODED DEPTH CHARGE ED
UNEXPLODED DEPTH CHARGES DEC 1952
UNEXPLODED DEPTH CHARGE OCT 31 1947
090
UNEXPLODED BOMBS DEC 1958
Cox Ledge
1710.4
1709.2
1708.2
R-4101
MARTHA'S VINEYARD
41-00 N
66 OPNAVINST 3750.6E
BOUNDARY W-105

41-30N
CONTACT ALFA (MAD)
41-28.5N
70-29.9W
CONTACT CHARLIE (MAD)
41-21.9N
70-54.2W
MCLEOD
EADES
SEAT PAN/LIFE RAFT
CABIN UPHOLSTERY
SEAT PAN/LIFE RAFT CASE (APPROX)
085° RADIAL-RIVERHEAD
BUZZARDS
F12sec 101ft 16M
HORN
R Bn 302
CONTACT BRAVO
SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6
ENCLOSURE (7)-2

STATEMENT OF MR. (b) (6) [redacted] GAEC EMPLOYEE IN CHARGE OF THE AVIATORS EQUIPMENT ISSUE ROOM AT THE PECONIC RIVER AIRPORT, SUBMITTED TO AAR BD 3 MAY 1965, CONCERNING BUWEPSREP BETHPAGE SERIAL 1-65A, 29 APRIL 1965, C-2A BUNO 148147, PILOT MCLEOD.

The following equipment was on board C-2A BuNo 148147 at the time of the accident:

1. 2 CFE Chest parachutes and harnesses

2. 2 CFE Mk 2 Life Vests

3. 2 GFE Quick Donning Anti Exposure Suits

4. 2 GFE PK2 Life Rafts with the following incorporated:
   - 1 sea anchor
   - 1 nylon chord - 50'
   - 2 dye marker
   - 1 sponge
   - 1 desalting kit
   - 1 water storage bag
   - 1 mirror

(b) (6) [redacted]

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E.

ENCLOSURE (8)

ENGINE HISTORY FOR CALENDAR YEAR 1965 OF MODEL C-2A AIRPLANE CONCERNING
BWR BETHPAGE SERIAL 1-65A, 29 APRIL 1965, C-2A BUNO 148147 PILOT MCLEOD.

DATE	WO	DISCREPANCY	CORRECTIVE ACTION
1-12-65	94	Change left propeller for internal leakage	Install new propeller
1-18-65	108	Right oil level indication low	Clear hung oil float
1-19-65	122	Reason for corrective action not given	Install sync. box and left/right engine solenoid valves
3- 1-65	164	Right engine hunts on deceleration in phase sync.	Normal due to transistorized sync. circuit
3- 1-65	167	Right oil level indication low	Continuity check-ground check satisfactory
3-12-65	188	Left fuel flow stuck at 1500 #/hr	Replace fuel flow indicator
3-12-65	189	Ground stop on left engine hangs up	Ground check satisfactory
3-16-65	201	Reason for corrective action not given	Replace right fuel boost pump
3-17-65	203	Left propeller won't unfeather	Ground check-satisfactory
3-17-65	206	Right generator cut out while unfeathering left propeller	Replace right generator
3-23-65	215	Reason for corrective action not given	Reinstall sync. box and both engine solenoid valves
3-24-65	219		Switched prop. sync. box with BUNO 148148
3-25-65	221		Switched again
3-25-65	222	Left prop. still won't unfeather (Repeat intermittent discrep.)	Changed relay
3-25-65	223	Right oil cooler circuit breaker popped	Replaced oil temp. control unit
3-25-65	224		Switched prop. sync. box again
3-25-65	226		Install solenoid valves in both engines to evaluate prop. sync. eq.

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

ENCLOSURE (9)

DATE	WO	DISCREPANCY	CORRECTIVE ACTION
3-26-65	227		Switch prop. sync. module between BUNOS 148147 and 148148
3-21-65	244	Right engine 98% and left engine 99% on take off	Adjust right prop. from 99.6% to 99.8%
4- 1-65		Aircraft inspection (Engines and props. waivered)	
4- 1-65	256	Right gear box oil pressure fluctuates	Changed oil both engines; Interchanged left and right oil tank pressure regulators
4- 1-65	257	Left engine has over 100 SHP (rev. thrust) in ground idle detent	Fuel control within spec. limits
4- 1-65	264	Right engine gains 2% RPM in SYNC	Ground and flight checks satisfactory
4- 7-65	275		Install left and right fuel enrichment switches
4-10-65	284	Engine gear box oil pressure fluctuates	(Repeat gripe) (No action) (WO 256)
4-10-65	285	Right feather warning light goes out on engine start	Diag. Normal operation
4-10-65	286	Right engine 100SHP high	Adjust power level
4-14-65	318	Right oil level indication intermittently shows low warning	Replace float switch
4-14-65	320	Gear box oil pressure fluctuates	Replace oil tank float switch
4-15-65	330		Changed components for sync. phase as required
4-15-65	336		Install transistor sync. system
4-22-65	362	50 hour special inspection on both engines	

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

DATE	WO	DISCREPANCY	CORRECTIVE ACTION
4-22-65	363	Right fuel flow indicator reads up to 300 #/hr low and fluctuates (other engine instr. normal)	Replaced fuel flow indicator
4-26-65	383	Reason for corrective action not given	Install instrumented fuel flow transmitter on both engines and calibrated fuel flow indicators in cockpit in matched pairs
4-26-65	385	Reason for corrective action not given	Changed right fuel flow indicator from BUNO 1[illegible]148 (foreign material in [illegible]e unit)
4-29-65	400	Right fuel flow reads 200 #/hr low and fluctuates (other engine instr. normal)	(This discrepancy not acted upon; not a downing discr.)

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 CPNAVINST 3750.6E

STATEMENT OF (b) (6) [redacted] MANAGER AVIATION MAINTENANCE, GRUMMAN AIRCRAFT ENGINEERING CORPORATION, SUBMITTED TO AAR BD 10 MAY 1965, CONCERNING BUWEPSREP BETHPAGE 1-65A, 29 APRIL 1965, C-2A BUNO 148147, PILOT MCLEOD.

The following statement is true to the best of my knowledge: C-2A BUNO 148147 was given a daily inspection in accordance with BuWeps Inst. 4700.2A on 28 April 1965. The aircraft was preflighted prior to the three flights on 29 April 1965 in accordance with BuWeps 4700.2A. There were no known discrepencies on the engines, propellers and fuel system when the aircraft was released for the flight on which the accident occured. A calendar major inspection was performed on the aircraft on 6 April 1965 and had accumulated 41.4 hours subsequently. The total time on the aircraft and engines were as follows A/C 116.3 Hours. L.E. 387.2
R.E. 386.8

(b) (6) [redacted]

Manager Aviation Maintenance
Grumman Aircraft Eng. Corp.

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

ENCLOSURE (10)

FLIGHT CLEARANCE FOR FLIGHT 94 ON 29 APRIL 1965, CONCERNING BUWEPSREP BETHPAGE SERIAL 1-65A, 29 APRIL 1965, C-2A BUNO 148147, PILOT MCLEOD

T.O. 1618

FLIGHT TEST CLEARANCE

Peconic River Airport
Calverton, New York

List Passengers:

Date 4/29/65 LT EADES (96)

Pilot No. 94

Model C-2A

Bu. No. 148147

Type of Flt. Flying Qualities at 5000 ft.

Pilots Signature [signature]

AD 356

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

ENCLOSURE (11)

PORTION OF RADIO LOG FROM GRUMMAN PECONIC RIVER AIRPORT TOWER, CALVERTON, LONG ISLAND, NEW YORK, ON 29 APRIL 1965, CONCERNING BWR BETHPAGE SERIAL 1-65A, 29 APRIL 1965, C-2A, BUNO 148147, PILOT MCLEOD

29 April 1965

TIME (local) (Q)	From	To	Remarks
1642	94	Tower	Peconic River, Flight 94, about ...er... one mile north of the center of Block Island.
	Tower	94	Roger 94. Loud and clear.
1708	94	Tower	94...(Transmission broken by another aircraft).
	Tower	94	94, Peconic, say again, you were bl[illegible]ed.
1709	94	Tower	Flight 94, about 3 miles north of Montauk.
	Tower	94	Three miles north of Montauk
	94	Tower	Roger. Simulating single engine.
	Tower	94	Roger, 94.
1726	94	Tower	Patuxent Tower, Patuxent Tower..... Correction, Peconic Tower, we've lost both the engines. Uh... don't know whether you read or not, but emergency IFF.
	Tower	94	94, Peconic, Roger. What's your position?
	94	Tower	Roger. We're approximately..uh..on your 2... Correction, about the ..uh..090 degree radial and we're off of Montauk. I see a small island. As a matter of fact two small ones. Very, very small both islands. (Underlined word almost unintelligible, but best estimate is both, despite the fact that there is not even a brief pause [illegible] small recognition it,)

(Transcription prepared by Board after listening to tape replay).

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66 OPNAVINST 3750.6E

ENCLOSURE (12)