

A 11/4
A 11 (Human Volunteers)

28 AUG 1955

From: Secretary of the Navy
To: Commanding Officer
Naval Air Material Center
Philadelphia 12, Pa.

Subj: Experimental studies of a medical nature involving persons in the Naval Establishment

Ref: (a) CG MEMPHIS, Phil., ltr XI-4:Etialc AE-1405 of 25 June 1955

1. Authorization to use (human test subjects) in connection with the project entitled "Evaluation of Physiological Hazards Produced by Explosive Decompression in Naval Aircraft" as requested by reference (a) is hereby granted.
2. This does not constitute authorization to pay (volunteers) for these tests incentive pay for the performance of extra-duties.

RICHARD JACKSON
Assistant Secretary of the Navy
(Personnel and Administration)

Copy to:
BuPers
BuMed
BuAer

REVERTED TO ORIGINATOR FOR
CANCELL THIS DATE 8-27-55
[Signature]

RELEASED TO OFFICE DESK
[Signature]

RECEIVED
[Stamp]

Office Memorandum • UNITED STATES GOVERNMENT

TO : Secretary of the Navy

DATE: AUG 20 1959

FROM : Chief of Naval Personnel

SUBJECT: Experimental studies of a medical nature involving persons in the
Naval Establishment

Ref: (a) NAMATCEN, Phil., ltr XG-4:EH:alc AE-1405 of 25 June 1959. v/ends.

1. By reference (a) the Commanding Officer, Naval Air Material Center, Philadelphia, requests authority to use human test subjects in a project entitled "Evaluation of Physiological Hazards Produced by Explosive Decompression in Naval Aircraft". Test personnel will be subjected to increasingly rapid decompression times until the rates which occur with loss of cockpit canopies are obtained. The Chief of the Bureau of Medicine and Surgery states that no injury to test personnel is expected to occur under existing safeguards.
2. The request is forwarded as a matter requiring your approval.
3. A recommended reply for your signature, approving the request, is attached.

Very respectfully,



ALMON E. LOOMIS
Deputy Chief of Naval Personnel

17 09 24 AUG 1959

RECEIVED
OFFICE OF THE
ASST. SEC. NAVY (P&RF)

33

THIRD ENDORSEMENT on HANCOCK, Phil., 1st AL-BREDALE 22-1007 of 22-1007
w/enc1

From: Chief of Naval Personnel

To: Secretary of the Navy

Subj: Experimental studies of a medical nature involving personnel in
Naval establishments

1. Forwarded, as a matter requiring approval of the Secretary.

ALMON E. BOGUE
Deputy Chief of Naval Personnel

Copy to:
SASD
SASD
HANCOCK, Phil.

BUMKD-711:aba
10170
12 Aug 1959

SECOND ENDORSEMENT on NAMATCEK, Phil., ltr XG-4:EH:alc AE-1405 of 25 Jun 1959
w/encl

From: Chief, Bureau of Medicine and Surgery
To: Secretary of the Navy
Via: Chief of Naval Personnel

Subj: Experimental studies of a medical nature involving persons in the
Naval Establishment

1. Forwarded, recommending approval.
2. The proposed study using human test subjects will provide information not otherwise obtainable to validate specification requirements for cockpit enclosures of naval aircraft as designed by the Bureau of Aeronautics. Test personnel will be subjected to increasingly rapid decompression times until the rates which occur with loss of cockpit canopies are obtained. These decompression times will be arrived at gradually. Test personnel will be protected by standard aviator's personal equipment and will be under the careful observation of trained medical department personnel. No injury to test personnel is expected to occur under the existing safeguards.

C. B. GALLOWAY
By direction

Copy to:
NAMATCEK, Phil.
BuAer (AE 14/42)

AER-AE-14/42

28 JUL 1959

FIRST ENDORSEMENT on NAMATCEN, Phila ltr XG-4:EH:alc AE-1405 of 25 Jun 1959

From: Chief, Bureau of Aeronautics
To: Secretary of the Navy
Via: (1) Chief, Bureau of Medicine and Surgery
(2) Chief of Naval Personnel

Subj: Experimental studies of a medical nature involving persons
in the Naval Establishment

1. Forwarded, recommending approval.
2. These tests are considered necessary to verify specification requirements. A recent aircraft incident of canopy loss survived by the aviator indicates previous data may be too conservative. This bureau desires to gradually approach decompression rates in existent aircraft with human subjects. Extrapolation solely from animal data is not considered reliable.

Copy to:
NAMATCEN, Phila

JOHN SINKANKAS
By direction

AE-4:KH:als
AE-1405

25 JUN 1959

From: Commanding Officer, Naval Air Material Center, Philadelphia 12, Pa.
To: Secretary of the Navy
Via: (1) Chief, Bureau of Aeronautics
(2) Chief, Bureau of Medicine and Surgery
(3) Chief of Naval Personnel

Subj: Experimental studies of a medical nature involving persons
in the Naval Establishment

Ref: (a) Art. 1-17, Manual of the Medical Department, 1949
(b) SECNAV ltr of 6 Nov 1954

Encl: (1) One copy of BUAEK ltr Aer-AE-14/37 of 12 Jan 1959 w/encl

1. Enclosure (1) assigns project TED NAW AE-1405 entitled "Evaluation of Physiological Hazards Produced by Explosive Decompression in Naval Aircraft" to this activity. Enclosure (1) further directs that approval be obtained for the use of human subjects in carrying out the experimental portions of the project. Accordingly, such approval is hereby requested.

2. Procedures outlined in reference (a) relevant to experiments on personnel shall be fully complied with.

3. Approval to use human subjects in studies involving the full pressure suit was granted by reference (b).

ROLAND A. BOSEE
By direction



DEPARTMENT OF THE NAVY

BUREAU OF AERONAUTICS

WASHINGTON 25, D. C.

Aer-AE-14/37

12 JUN 1958

From: Chief, Bureau of Aeronautics
To: Commanding Officer, Naval Air Material Center
U. S. Naval Base, Philadelphia 12, Pennsylvania

Subj: TED NAM AE-1105 - Evaluation of Physiological Hazards produced by
Explosive Decompression in Naval Aircraft

Ref: (a) CO, NAMAMCEN ltr XG-4:EH:dc ALL/AL (1067) of 27 Apr 1959

Encl: (1) Project Details

1. Priority: B. Project Classification: Unclassified.
2. Costs are chargeable to Allotment E, BuCoNo. 206, Budget Project No. 75, Job No. 2, Appropriation 17X1319.90, Account No. 46870.
3. Desired Completion Date: 30 June 1960.
4. Operational Requirement No. PO 12501, RDB Project No. NA 551-001.
5. Abstract of Project: To conduct full scale explosive decompressions in decompression chambers on current and future Navy aircraft to assess the physiological hazard.
6. Cognizant BuAer Engineer: Capt. Walton L. Jones, MC, USN, Division: Airborne Equipment, Room: 1W17, Extension: 62849.
7. Source of Equipment and/or aircraft: Fabricate as necessary.
8. Disposal of Equipment: Retain.
9. Type Reports and Distribution: Significant interim and twelve copies final report to Chief, Bureau of Aeronautics. Submit list of addressees for additional distribution to BuAer for approval.

JOHN SIRKANKAS
By direction

Copy to:
BUMED, Code 714
BUMED, Code 5
ONR, Code 403
ONR, Code 461
CDR, NAVAIRANDACT, Johnsville
CIR, NATESICEN, PaxRiv
CO, NAVSCOLAVMED, Pncla
Addressee (14)

Project Details

Subj: TED NAM AE-1405 - Evaluation of Physiological Hazards produced by Explosive Decompression in Naval Aircraft

1. The following project resulted from Bureau of Aeronautics/Air Crew Equipment Laboratory conferences and as detailed in reference (a) of the project directive.
2. In order to assess the possible physiological hazards to personnel from explosive decompression in current and future models of Naval aircraft, full scale explosive decompressions will be carried out in ACCEL decompression chambers. Preliminary evaluation of the physical parameters affecting the severity of decompression effects will be conducted for each simulated aircraft configuration, prior to including human subjects in the experiments. In the course of this evaluation, accurate measurements of the pressure-time history in various locations of the test set-up would be made.
3. Subjects wearing standard aviator's personal equipment will be explosively decompressed through gradually increasing pressure differences and orifice sizes until those simulating the actual conditions for the aircraft configuration and mission would be achieved. Suitable physiological data will be collected, together with environmental data, and this will be supplemented with subjective comments.
4. From information obtained as indicated above, as well as that amassed from contractor sources on various aircraft configurations, and from accident reports, design parameters suitable for inclusion in aircraft specifications will be prepared.
5. Authorization for the use of human subjects in carrying out experiments involving explosive decompression as outlined above, must be requested from SECNAV if not previously authorized.

Encl: (1) to BuAer ltr
Aer-AE-14/37 of 12 JUN 1960.