16. NAMES AND ADDRESSES OF WITNESSES OF FIRST TEST

Capt. Trapnell, Dick USMC January 15, 1954 From Airborne AD

Men on duty at target 35 January 15, 1954 Time 1700

Second Test - January 29, 1954. Third Test March 5, 1954 Mcas El Toro

17. DATE, PLACE, DESCRIPTION AND RESULTS OF LATER TESTS (Name witnesses)

The above tests proved a different designed tank was needed and larger openings incorporated. The X1 Fire Tank was later designed and constructed. On April 28, 1955 Lt.Col. Richardson CO of H&MS 15 flew the first and only test with the X1 Fire Tank using an AD-5. The results of the test proved that 360 gals of foam was released and covered an area of 40 yds by 200 yds. For proper foaming action more experimental work will have to be conducted and a venturi on the aft end of the tank was needed which wasn't used on this tank.

18. IDENTIFY RECORDS OF TESTS AND GIVE PRESENT LOCATION OF RECORDS

Record of flight test MCAS El Toro. 16 mm film Maj. W. F. Schroeder 2740 Monroe Blvd Dearborn Mich. Photo Records Naval Photographic Center NAS Anacostia.

19. PRIOR REPORTS OR RECORDS OF INVENTION TO WHICH INVENTION IS RELATED

None that I know of.

20. OTHER KNOWN CLOSELY RELATED PATENTS, PATENT APPLICATIONS AND PUBLICATIONS

PATENT OR APPLICATION NO.	DATE	TITLE OF INVENTION OR PUBLISHED ARTICLE	NAME OF PUBLICATION
Same as 19.			

21. EXTENT OF USE; PAST, PRESENT AND CONTEMPLATED (Give dates, places and other pertinent details).

Aerial asult in mass fire control

Aerial asult in mass insect control

Aerial decontamination in regards to Atomic fall-out (Future)

22. DETAILS OF INVENTION HAVE BEEN RELEASED TO THE FOLLOWING COMPANIES OR ACTIVITIES

NAME AND ADDRESS	INDIVIDUAL OR REPRESENTATIVE	CONTRACT NO.	DATE
Douglas Aircraft	RH Vanesselstyn	Drawings of X1 Fire Tank	6/25/54
California Forestry	James K. Mace	" "	6/20/54
U of California School of Forestry	Dr. Keith Arnold	Rough Drawings	May 10 54 Approx

ENC 1

APPENDIX SIX

The idea of using aircraft to extinguish fires that could possibly develop into forest fires came about when Major Warren F. SCHROEDER sighted a forest fire east of Camp Pendleton, California on 5 October 1953. This brought about the idea to drop napalm tanks filled with water, but this was discouraged. The idea of a non-droppable tank containing foam was later developed. Lieutenant Colonel Frank P. BAKER 09417/7331 USMC, Commanding Officer of Marine Attack Training Squadron 10 at the time authorized the development of the non-droppable tank.

A surveyed TV wing-tip tank was procured and the development of the XO FIRE TANK began. If large enough glass openings in the front and aft ends of the tank could be installed and blown out with small detonators the foam or chemical in the tank would discharge rapidly with the force of RAM air acting at the front of the tank. Two experimental test flights were conducted during the month of January 1954. Both tests proved that the foam wasn't discharging rapidly enough to provide coverage. Modifications were made after the first test, the major modification was the change of a six (6) inch opening in the aft end of the tank to a twelve (12) inch opening. The front opening of five (5) inches remained the same. The second test showed a greater improvement over the first. Those tests proved that larger openings were essential if a heavy concentration of foam over a distance of two hundred (200) yards was desired. This is the major problem of this development.

Adapters made of steel were attached to the aluminum tank with a twelve (12) inch opening in the front and a fourteen (14) inch opening in the aft end. Plate glass one-quarter ($\frac{1}{4}$) inch in thickness was used to cover these openings. Three detonators were installed on the outside of the glasses. One detonator in the front and two in the aft. A ventura band was attached to the aft end of the tank to create a lesser pressure and better mixing of the foam. With these modifications completed, the tank was ready for its third test flight.

The third test flight was flown on 5 March, through the approval and cooperation of Colonel J. C. AGGERBECK, Jr. 05358/9907 USMC. Commanding Officer of Marine Training Group 10 and Major F. L. KEMPER 014452/7331 USMCR, Commanding Officer of Marine Attack Training Squadron 10.

The flight was made by Major W. F. SCHROEDER flying an AD-2 type aircraft at an altitude of forty (40) feet above the terrain at one hundred forty (140) knots indicated air speed. Foam definitely covered the ground and one test pannel was covered with one (1) inch of foam. The test was witnessed by representatives of the California Forestry Department and was considered very successful and to have outstanding

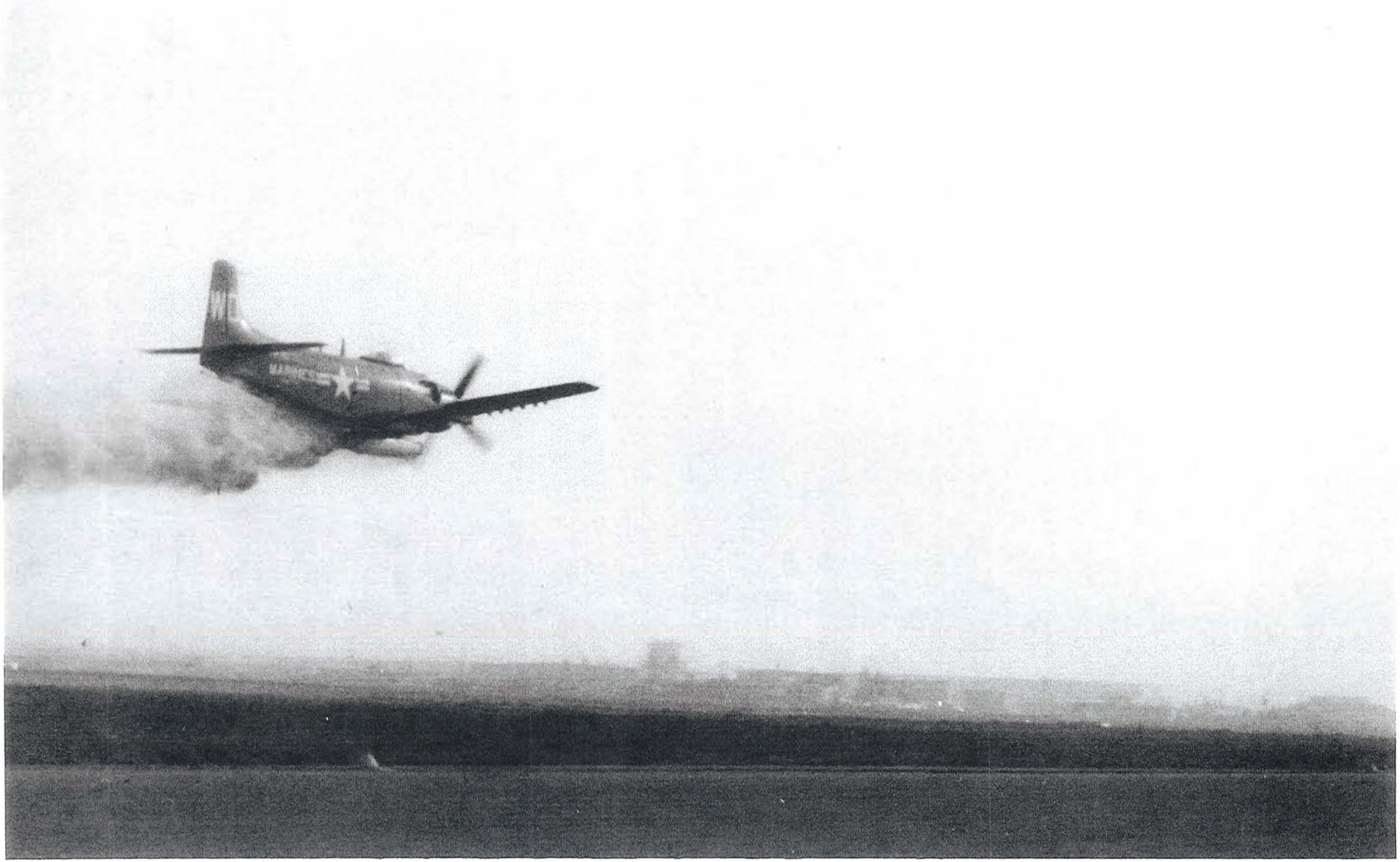
possibilities. Photographs were taken of the test but did not come out due to camera difficulties. It may be possible to make another test at a later date using three (3) tanks.

Using AD type aircraft, eight hundred (800) gallons of foam could be carried in three (3) external tanks. Fifteen (15) aircraft could deliver twelve thousand (12,000) gallons of foam on a fire if terrain features and type of fire would permit a low pass at an altitude of forty (40) feet. The pilots after dumping their load could return to the airfield, reload and return to the fire using a relay system. A fire control officer acting as a forward air controller at the fire could control the runs and transmit pertinent information.

The principal plan of an AERIAL ASSAULT of a FIRE is to attack when the fire is just starting and the possibilities of an aerial attack where ground forces cannot gain excess to the fire with equipment immediately.

In rough terrain, droppable plastic tanks may be feasible if made at a reasonable cost and dropped like napalm tanks. This method has not been tried.

Future reports of the development will be submitted in the H&MS-10 Command Diary.



January 2, 1957

Mr. Dwight D. Eisenhower
President of the United States
Washington, D. C.

Dear Mr. President:

In view of the recent FOREST FIRES in California, in which one of our nation's most vital resources is being destroyed not to mention, water-shed, wild life and personal property; I am writing this letter of request.

I desire a letter for an interview with the Secretary of Agriculture or the Chief of Forestry so I may personally present my Aerial Fire-Fighting project and theory for possible further development.

Considerable development was accomplished while I was on active duty in the U. S. Marine Corps., stationed at MCAS El Toro, Santa Ana, California. With very limited material and shop facilities the XO and X-1 FIRE TANKS were constructed. Flight tests were conducted when they wouldn't hamper our Flight Schedule.

The RESULTS OF this work and testing proved the fact that it is very feasible for 1C AD type aircraft to deliver 9000 gallons of Unox, which would equal 90,000 volume gallons of foam upon release. Delivery in a specified area has been accomplished. If this project could be continued, a new phase of fire fighting may be developed.

Routine procedures and red tape can cause much confusion and delay, therefore, I am composing this ACTION LETTER under civilian status. I have invested time and money in this project and am willing to come to Washington, D. C. at my own expense to get further action.

My ambition is to be the first, in the histogy of forestry aviation, to extinguish fires that may develop into forest fires.

Character Ref: Marine Officers Records - Warren F. Schroeder-Major - 028752 USMCR/ 14 years service USMCR/ Combat service in WW2 and Korea/

Yours truly,

Warren F. Schroeder
5491 Heather Lane
Dearborn, Michigan

Enclosures attached:
1. Resume of project and testing results from VMA-t10 Historical Diary March 1954.
2. Photographs of XO FIRE TANK
3. Resume of the X-1 Fire Tank
4. Photographs of X-1 Fire Tank
5. Correspondence on Project

Resume of the X-1 FIRE TANK

After the third test flight of the XO Mod. 8 Fire Tank, on March 5, 1954, it was decided that a faster "dump rate" was necessary. This has been the major problem, which led to the designing of the X-1 Fire Tank-enclosure 4.

After gathering pertient information and permission, construction of the X-1 Fire Tank began in the latter part of 1954, at the Corpus Christi Naval Air Station. Salvage material was mainly used and actual construction was conducted in the squadron Metal shop. The same principal of chemical release was used as in the previous designed tank. The design of the X-1 Fire Tank was altered from design of the XO Fire Tank to provide maximum load and larger openings, which would maintain the same water pressure on the glass. This method of chemical release using small detonators to shatter the glass isn't practical, but was the only method available.

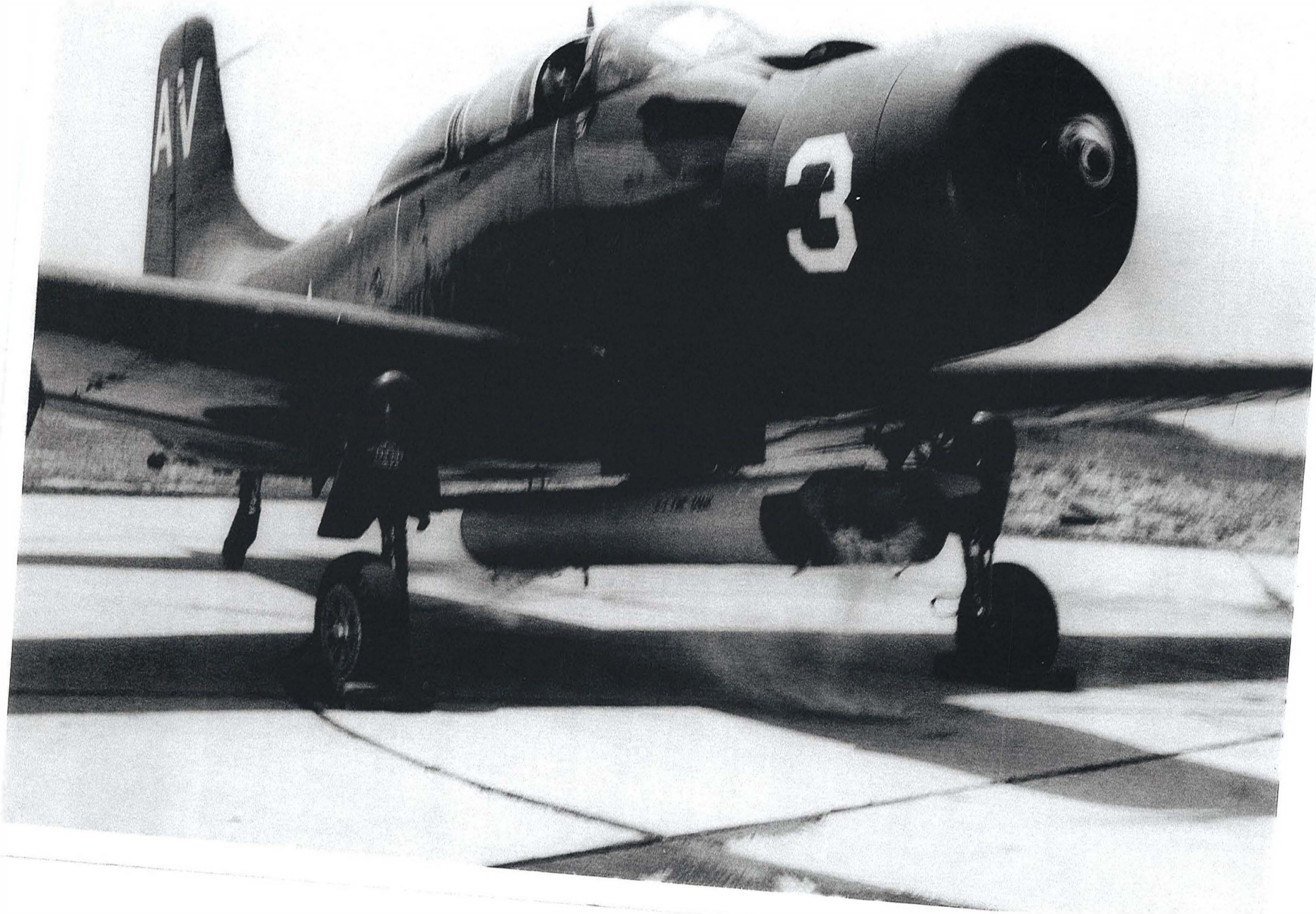
One ground test was made to evaluate the efficiency of detonators on the larger ¼ inch plate glass. The ground test proved that three detonators were necessary instead of two detonators for each glass.

On April 28, 1955, the first and only flight test of the X-1 Fire Tank was accomplished using an AD-5. The results of this test proved that 360 gallons of chemical was released and covered an area of 40 yards wide by 200 yards long. Using out-dated Foam and lack of experimental tests, the foaming action wasn't as efficient as the foaming action of the XO Fire Tank Mod. 8 on its third flight test.

This flight test did prove that an efficient dump rate was obtained and more experimental work was necessary. Tanks constructed in the future should be designed by Aero Tank designers and engineers.

The installation of water tight releases using hydraulic actuating mechanism will expedite chemical release and loading operations.

This concluded the testing on my behalf and the information compiled was turned over to the California Forestry for future evaluation. Lack of funds prevented further experimental work by the California Forestry.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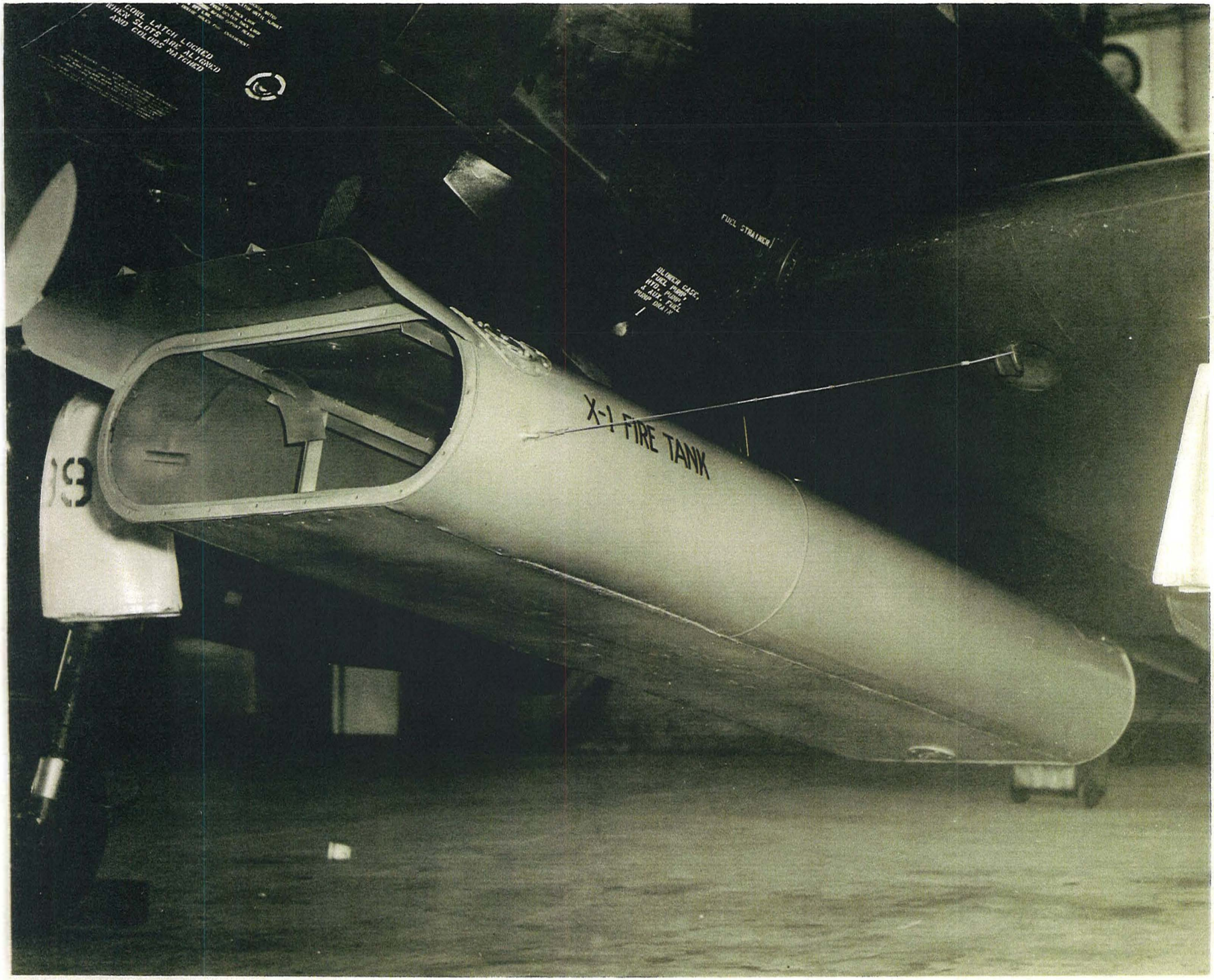
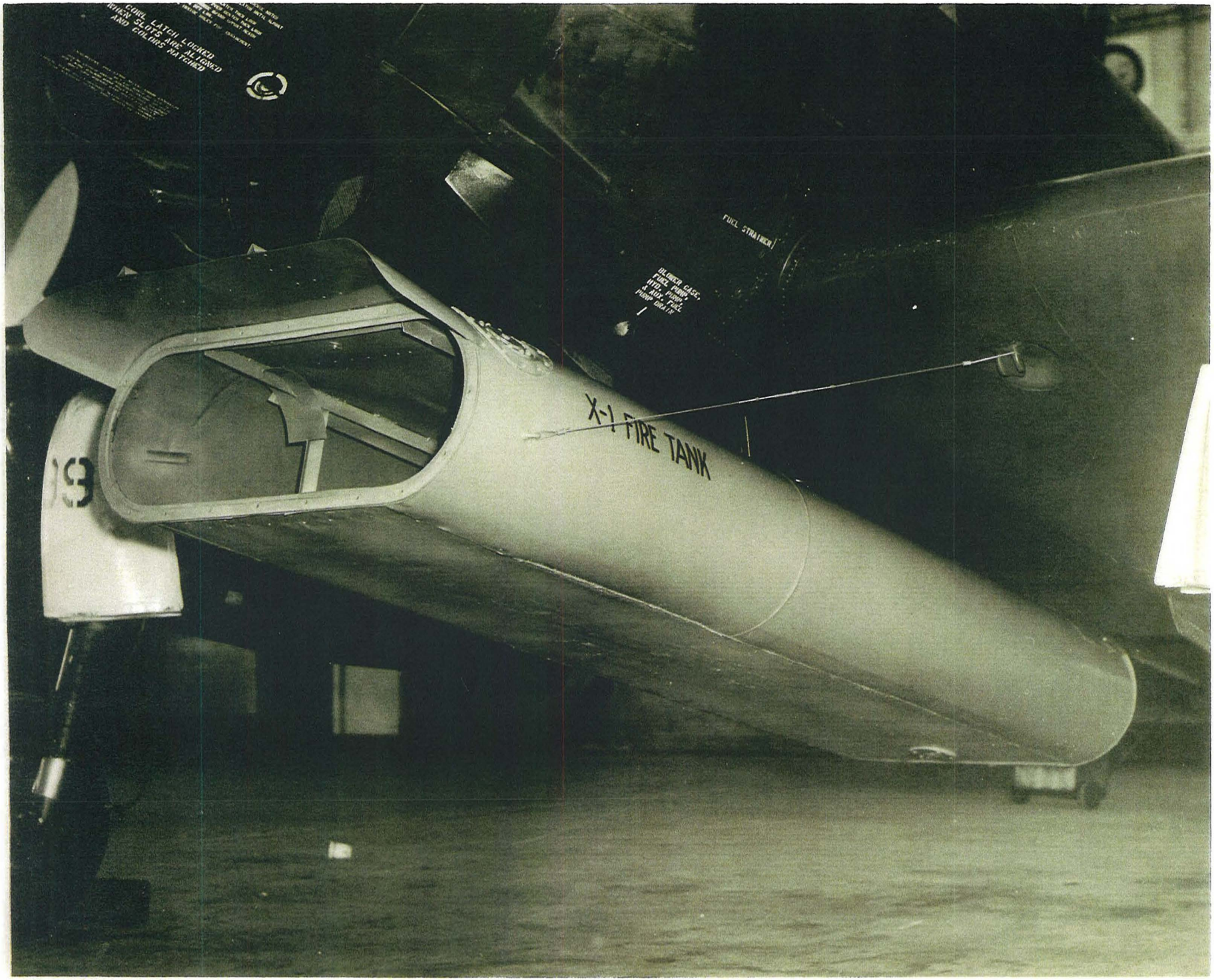
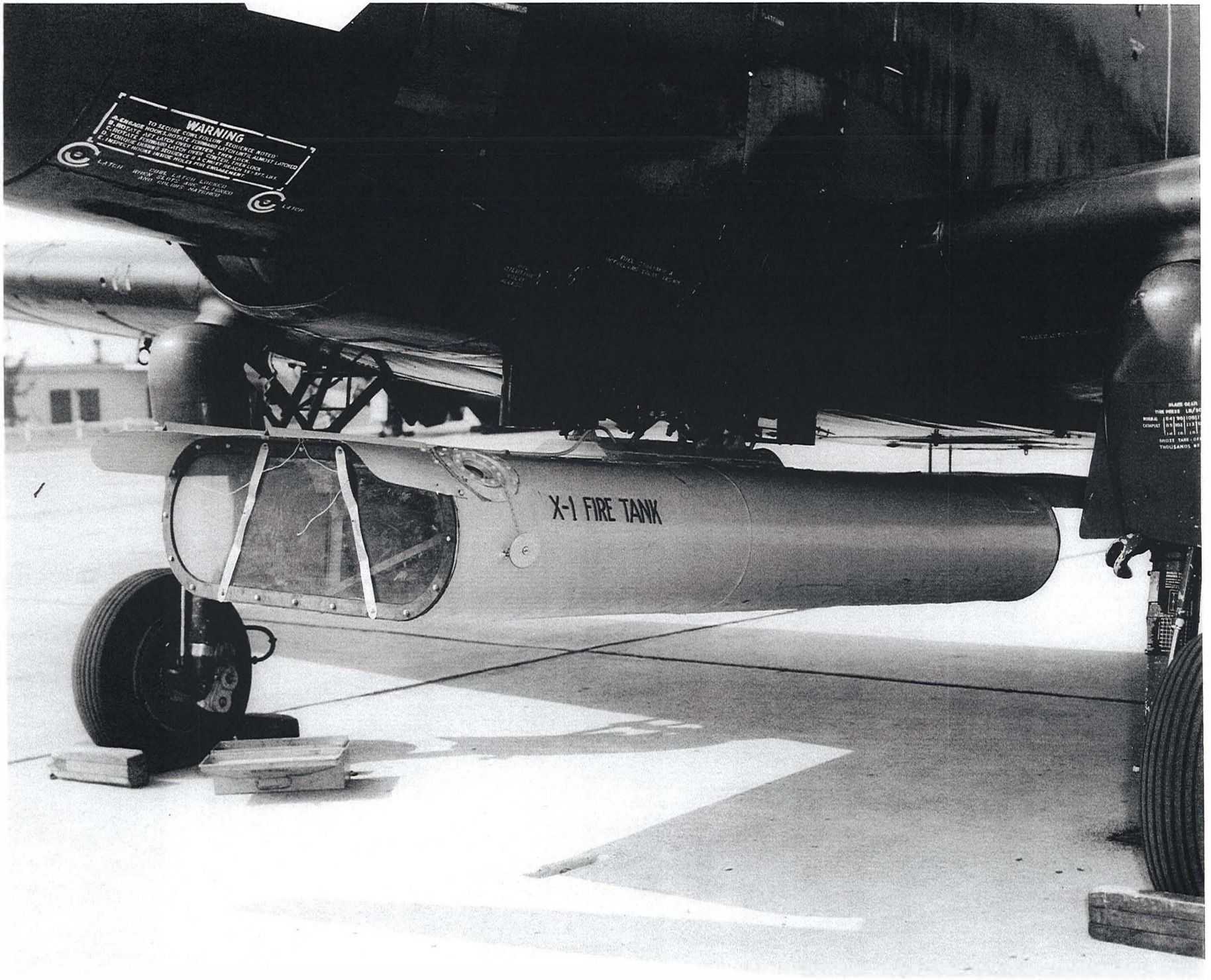
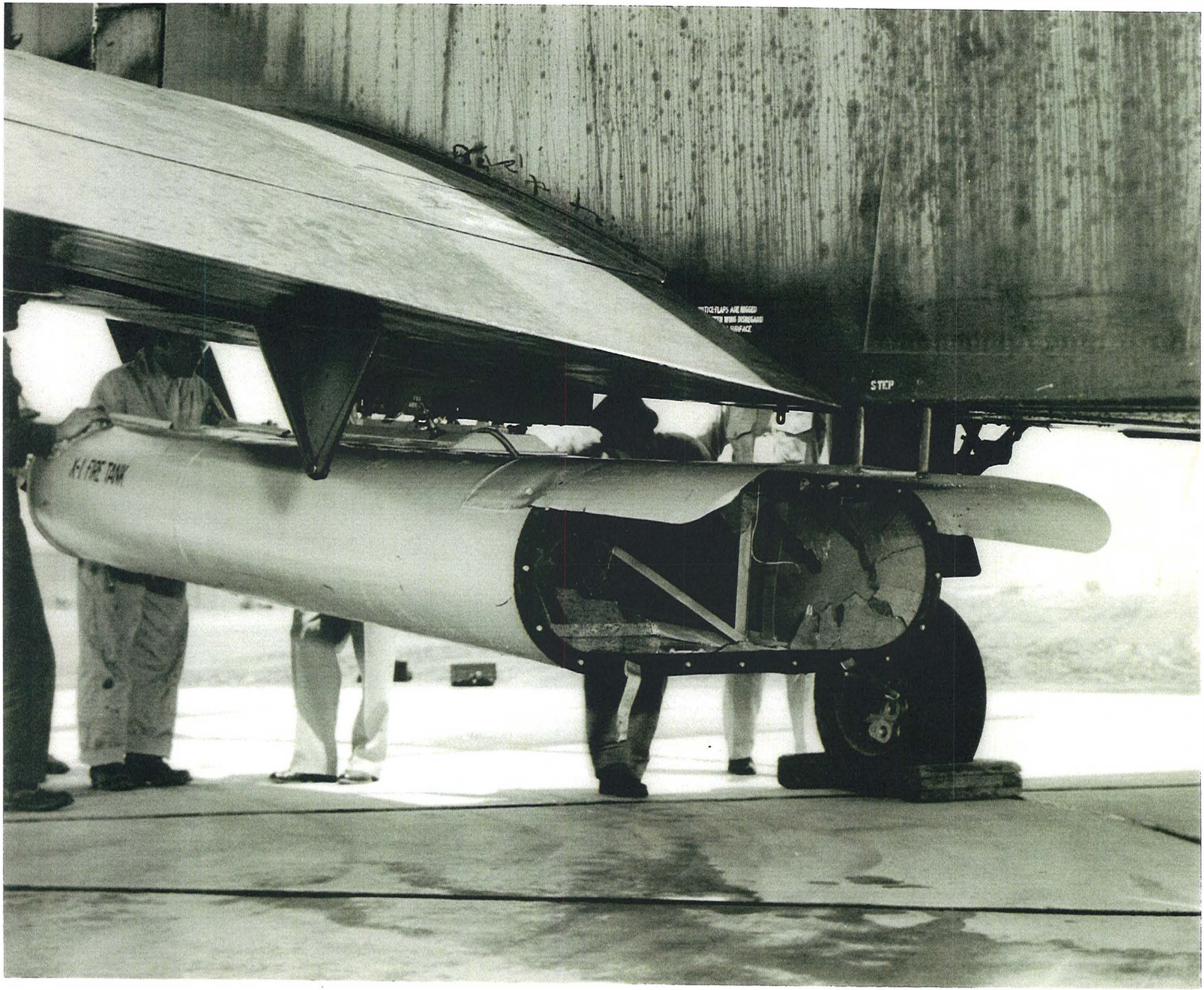

X-1 FIRE TANK
FUEL STRAINER
BLOWER CASE, FUEL PUMP, HYD. PUMP, & AUX. FUEL PUMP DRAIN


FUEL STRAINER
X-1 FIRE TANK


WARNING
X-1 FIRE TANK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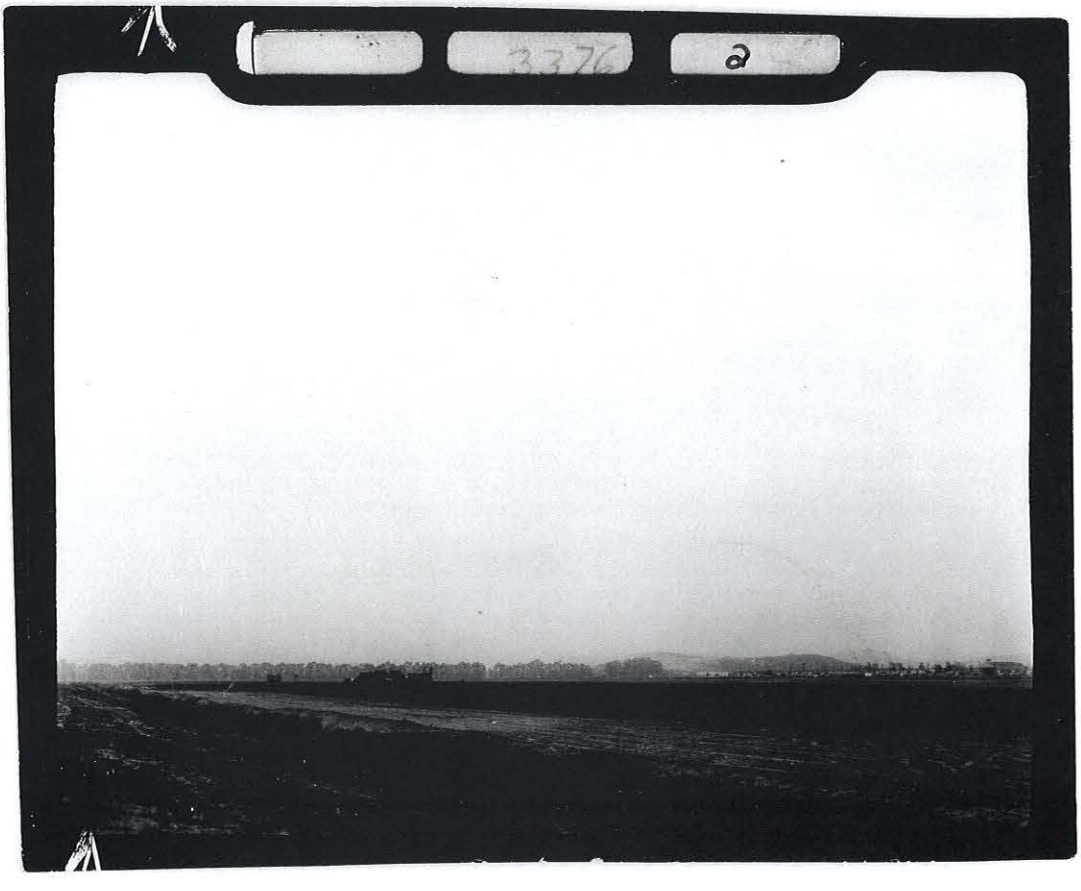
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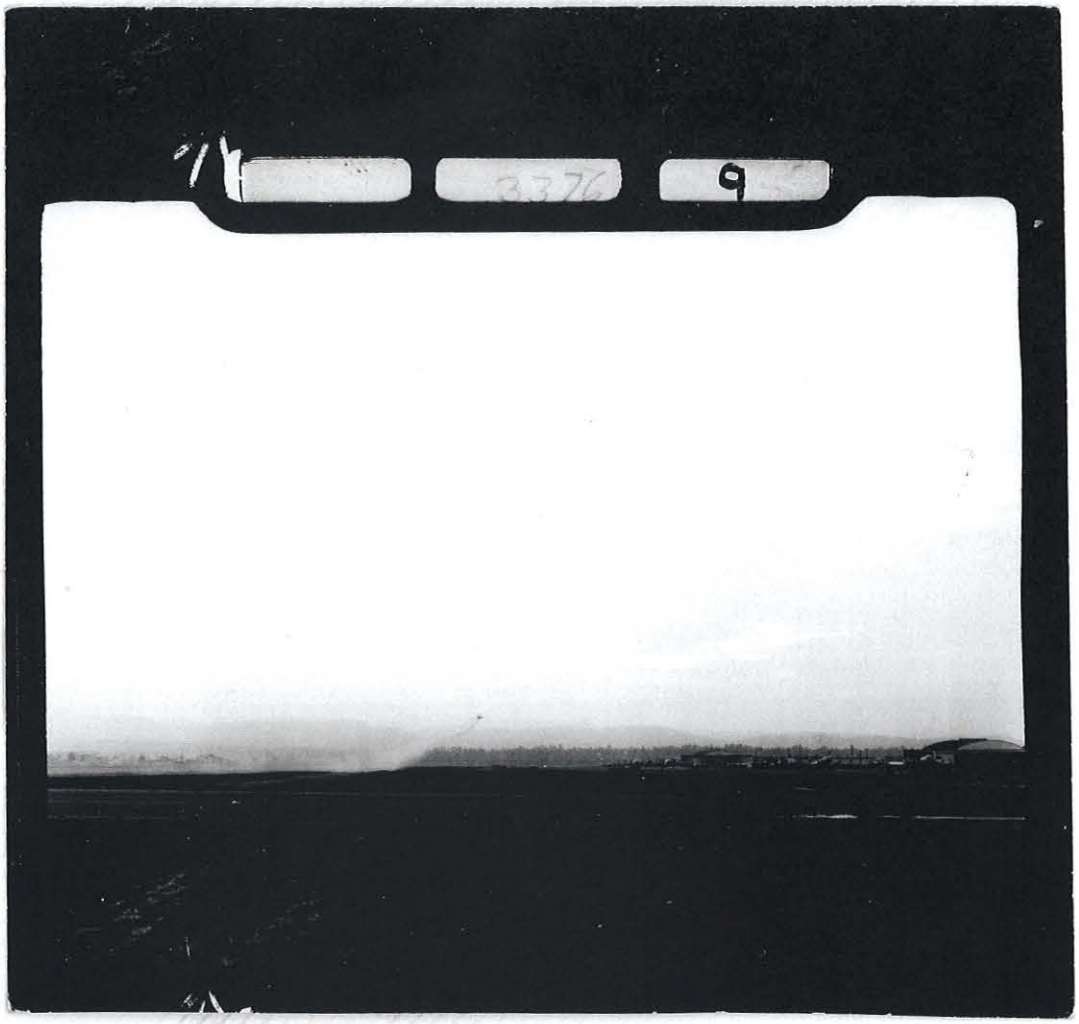
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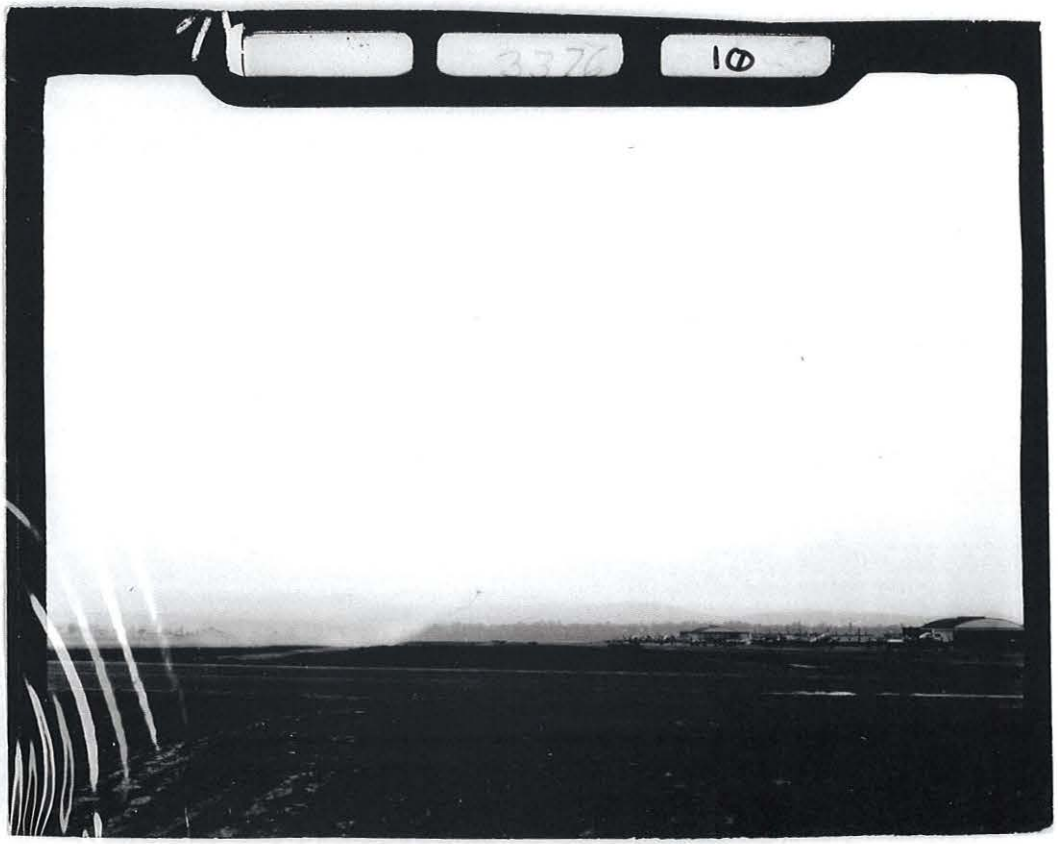
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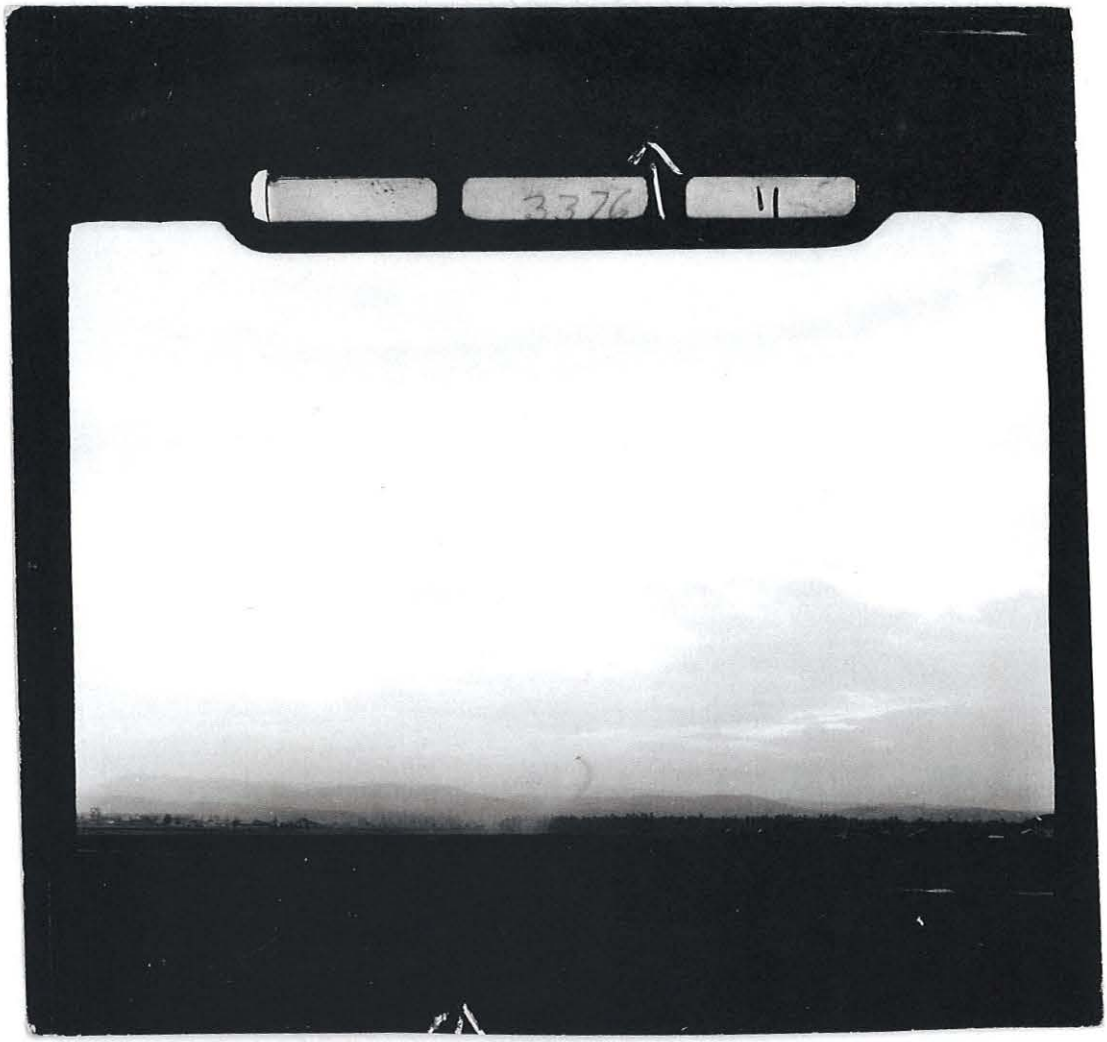
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5491 Heather Lane
Dearborn, Michigan

February 18, 1957

Refer to: F
EQUIPMENT
Development
(Air Tankers)

Mr. Richard E. McArdle, Chief
Forest Service
Washington 25, D.C.

Dear Sir:

Your letter of February 7 was most encouraging to hear that experimental work along this line is being continued. The possibility of working for the United States Forest Service is the only possible opening in reference to my continuing working on this project.

In answer to your last paragraph I am submitting the following information.

Military status: Active Reserve Squadron VMF 222, NAS, Grosse Ile, Michigan. Monthly week-end flying of AD aircraft.
Note: Can be transferred at anytime to another unit. No Problem.

Civilian Employment: Self-employed Landscaper
Note: Because of weather problems in landscaping I am considering changing occupation. No Problem.

Qualifications: Over 2000 hours (First Pilot time) in Naval Aircraft specialized in Close Air Support and low level attack. Also instructed Instruments in SNB-5.
Desire and Determination: Refer to my project or contact Mr. Mace of the California Forestry.

Married and have two children. My age is 36, height 5'11', weight 175#.

I feel I will be an asset to the Forest Service in this line of work. To assist me in future plans, the earliest possible decision on your behalf will be appreciated.

Yours truly,

Warren F. Schroeder
5491 Heather Lane
Dearborn, Michigan

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

ADDRESS REPLY TO
CHIEF, FOREST SERVICE
AND REFER TO

WASHINGTON 25, D. C.

F
EQUIPMENT
Development
(Air Tankers)

March 12, 1957

Mr. Warren F. Schroeder
5491 Heather Lane
Dearborn, Michigan

Dear Mr. Schroeder:

Your letter of February 18 is received.

On February 13, your proposal of January 2 was discussed with representatives of the California Region, the California Forest and Range Experiment Station, and the Arcadia Equipment Development Center.

This group recommended that development of foam-laying equipment for aircraft be postponed until further work in "cascading" chemicals has been completed, and laboratory and ground research with foams can be carried out.

All flying in both the developmental and operational part of the fire fighting program is under the jurisdiction of the Regional Forester, U. S. Forest Service, 630 Sansome Street, San Francisco, California. With the addition of the TBM aircraft, the Region may have an opening for another pilot. We are forwarding copies of your correspondence to the Regional Forester in San Francisco, and, by copy of this letter, we are asking him to advise you regarding possible employment either as a pilot in the Forest Service or with private operators that serve the Forest Service.

We greatly appreciate your interest in our air work.

Very truly yours,

Merle S. Lowden

MERLE S. LOWDEN, Chief
Division of Fire Control

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

ADDRESS REPLY TO
CHIEF, FOREST SERVICE
AND REFER TO

WASHINGTON 25, D. C.

K(F)
PERSONNEL
(Warren F. Schroeder)

March 20, 1957

Mr. Warren F. Schroeder
5491 Heather Lane
Dearborn, Michigan

Dear Mr. Schroeder:

Reference is made to our letter, F-EQUIPMENT Development (Air Tankers), dated March 12 and your phone call to Dr. McArdle. He has asked us to write you to more fully answer the questions you asked him. We believe our letter of March 12, which you have no doubt received by now, answers most of these questions.

Although you have done good work toward developing aerial application of fire foam and have a great interest in the use of airplanes in forest fire control, laws governing the appointment of personnel in the civil agencies require you to compete with other candidates for any position vacancies we may have. Civil Service procedures and requirements must be followed. The time that it takes to go through all of the procedures and to meet requirements varies greatly depending upon occurrence of a position vacancy, the existence of a Civil Service Register for the position scheduling of Civil Service examinations, your qualifications, and the qualifications of other candidates.

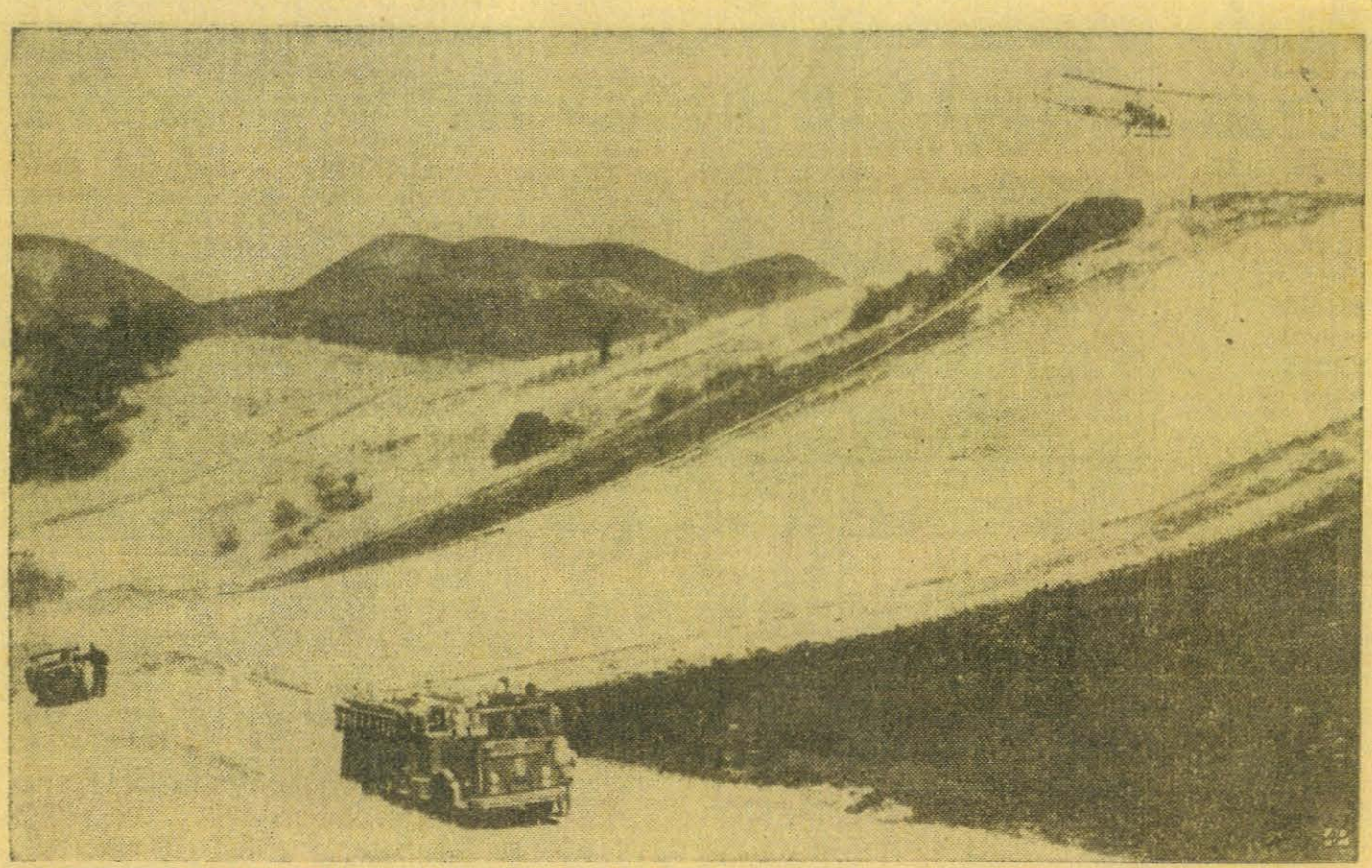
In view of the above, we believe you will clearly understand that you should not sell your business, quit your job, or take any such action with the expectation that you will soon have a job with the Forest Service. We understand your eagerness for rapid action in this matter especially in view of an offer to purchase your business.

The Regional Forester's office, San Francisco, will do their best to inform you as soon as possible regarding opportunities for you in the Forest Service and the steps you should take in obtaining Civil Service employment.

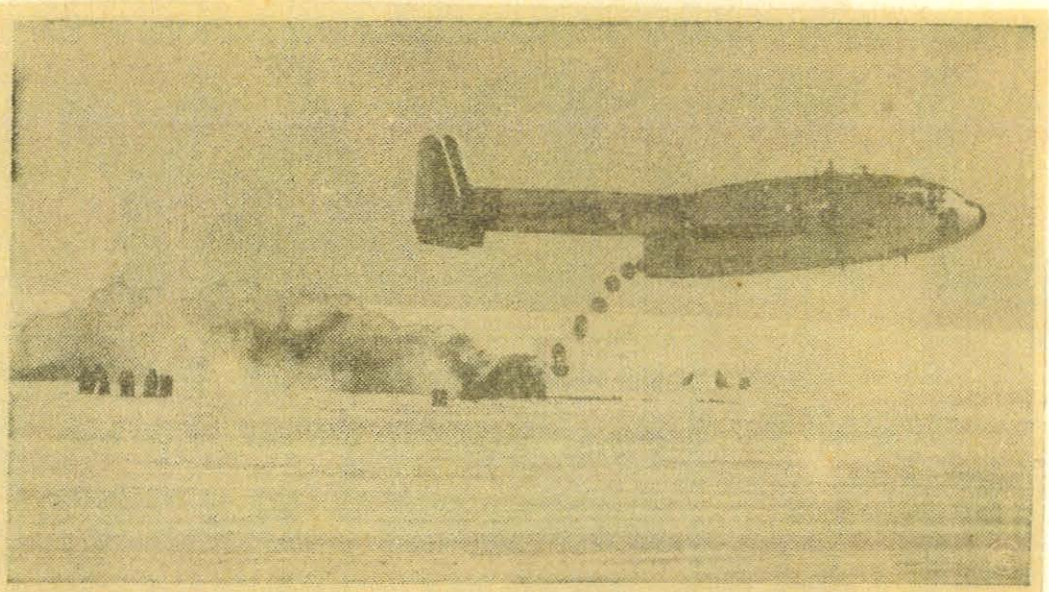
Very truly yours,

Bernard A. Anderson

BERNARD A. ANDERSON, Chief
Division of Personnel Management



NEW WAY TO COMBAT FOREST FIRES — In fire-fighting demonstration at Camp Pendleton, Cal., this helicopter carries fire hose up hill to show how it can be placed across terrain too rough or too hot for ground crews.



'OILY' BIRD IN THE ARCTIC — A U. S. Air Force C-119 transport drops barrels of fuel at an isolated military installation on the Greenland ice cap. All the supplies for the station are either dropped by low-flying transport planes or landed by transports equipped with skis.

Backfires Ignited in Effort To Check Raging Forest Blaze

SAN BERNARDINO, Calif., Sept. 27. (AP)—Grimy crews ignited backfires and carved new firebreaks in heavy timber early today in their battle to stop flames threatening to invade two evacuated communities in the San Bernardino Mountains.

The fire, which already has destroyed three small structures and 5,000 acres of brush and timber, forced nearly 1,000 persons from the resort settlements of Cedar Pines and Job's Peak in the San Bernardino National Forest yesterday.

Most Serious Blaze

The blaze is the most serious of eight forest and brush fires still burning in California. In the past five days these and other fires in the state have cost three lives, at least a dozen homes and 19,000 acres of watershed cover.

Only the fire near here and a 750-acre blaze near Los Padres National Forest not far from Monterey remain out of control.

More than 600 men on the firelines north of here were aided during the night by a rise in humidity to 35 percent, and a drop in wind volocity. Unfortunately, the wind was expected to increase today.

Many of the men, including crack Zuni Indian "smoke eaters" from New Mexico, have had little or no sleep since this fire began Saturday.

The flames crackled down the steep mountain slopes to within a half mile of this city of 80,000, showering the area with sparks. A wind shift swirled the flames away and four miles up the mountain to the edge of the town of Crestline.

Fire fighters, using 150 pieces of equipment, turned the flames back. The fire then roared through Devil Canyon, leaping firebreaks guarding Cedar Pines and Job's Peak.

U. S. Ranger Don Bauer, who directed the battle from a helicopter, said his crews hope to control the inferno by Tuesday morning.

Fires Rage In California, NevadaWoods

SUSANVILLE, Calif., July 21. (AP)—More than 25 square miles of California and Nevada timber and ranch land lay smouldering in the wake of five fires but the largest appeared to be under control today.

By far the most spectacular blaze had touched over ten thousand acres about 50 miles east of here, centering around Hallelujah Junction. It was visible in Reno, 30 miles southeast. It was reported under control last midnight. But 150 firefighters from both states had controlled the fire Monday midnight only to see flames from smouldering embers jump fire lines and race northward on 25 to 30 mile winds yesterday.

Ten miles north of Susanville another fire burned through 4,800 acres of timberland. It was re-

1,500 Firefighters Stop California Blaze

MONTEREY, Calif., Oct. 16. (AP)—The destructive forest fire burning out of control for the past week in the Coast Range 15 miles southeast of Monterey was checked today through the efforts of 1,500 firefighters and improving weather conditions.

Winds whipping the dangerous blaze through timber and brush on the watershed subsided and damp fog rolled in from the sea. The fire had burned over more than 13,000 acres before it was slowed down.

FIRE NEARS MARINE BASE

NEW BERN, N. C., April 24. (AP)—Firefighters were promised a 50-50 chance for rain tonight in their battle against a half million dollar forest fire that was within four miles of the Cherry Point Marine Air Base.

Hundreds of Marines from Cherry Point and Camp Lejuene worked with Rangers and volunteer paper company woodsmen to control the fire.

Giant Forest Fire Rages in North Carolina

RALEIGH, N.C. (AP)—Fire fighters and military personnel battled today to halt the largest forest fire in North Carolina history. It has destroyed more than 250,000 acres of timberland in two eastern counties.

The fire, possibly the largest ever to burn in the South, swept past the village of Ponzer yesterday but no homes were lost. Another Hyde County village, Scranton, was threatened.

The fire broke out in the swampy area near Lake Phelps in Tyrell County last week.

A Washington, N.C., National Guard unit of two officers and 45 men was dispatched to the scene by Gov. Luther Hodges. Marine authorities at Camp Lejeune sent a big pumping outfit and 50 men. From Ft. Bragg came four pumpers. Three pumpers were sent by Coast Guard installations.

Asst. State Forester P. W. Tillman estimated the fire had burned a distance of about 20 miles. He said it was the "largest fire we've ever had."

No estimate of the damage was available.

Meanwhile, 16 forest fires were reported yesterday in the Rocky Mount area, Tillman said. One blaze near Bethel had burned over 8,000 acres.

NEWS APR 11, 1962

COOLING OFF—A Martin Mars flying tanker dumps about 8,000 gallons of water in a test of firefighting ability in British Columbia. The former Navy seaplane, nicknamed the "Marianas," has been modified to scoop water from a lake and "bomb" it on a forest fire. The plane is one of four purchased by Forest Industries Flying Tankers Ltd. for the job.

* * * * * * * * *

Flying Boats Back at War, This Time Fighting Fires

By EDWIN G. PIPP
Detroit News Aviation Editor

The giant Martin Mars flying boat, which once carried 308 men on a single flight, today is used as a flying water tank to put out forest fires.

The plane has been modified to skim along the surface of a lake and scoop into specal tanks 8,160 gallons of water in 15 seconds. The Mars then flies over a fire area where it can dump the water in 3 seconds.

The former Navy plane is now owned by Forest Industries Flying Tankers Ltd., an association of six British Columbia wood products firms. Its summer base is at Sproat Lake, near Port Albernie, B.C.

One of the aircraft was used against six fires in 1960 with great success. It completely extinguished one fire with a single water drop. Three others are being prepared for use this year.

RETIRED IN 1956

The first Mars plane was flown in 1942 and used extensively by the Navy as a cargo ship. It completed 78 trips to the Central and Southwest Pacific during World War II before being retired.

Five other similar flying boats were delivered to the Navy after the war and used as cargo carriers before being taken from service in 1956.

At one time they held records for:

Greatest payload lifted by a seaplane—68,372 pounds.

tients airlifted by a seapla
100, plus 21 crew members
attendants.

Four of the big planes
headed for the scrap heap
the Canadian firm bought t

A 6,000-gallon tank and
smaller tanks were installe
the big cargo compartme

Two hydraulically exte
scoops or props were insta
under the fuselage. These
draw about a ton of wate
second as the plane skims
a lake at 75 miles an h
They break off if they mee
obstruction.

HIGH EFFICIENCY

The water is dumped thro
16 square foot doors.

In bombing a fire, the p
is flown 200 to 300 feet a
the fire. The water covers
area 150 to 200 feet wide
500 to 550 feet long.

The former Navy planes
vide about double the con

'Marriage Mill' Slowing Down

MONROE, April 11.—Monroe County slowly is losing

STATE OF CALIFORNIA—RESOURCES AGENCY

Edmund G. Brown Jr., Governor

DEPARTMENT OF CONSERVATION
DIVISION OF FORESTRY
P. O. Box 1067
Riverside, California

April 23, 1976

Mr. Warren F. Schroeder
20130 Outer Drive
Dearborn, Michigan 48124

Dear Colonel:

We received your package, which arrived in good shape, and we are in the process of forwarding it up to Len Chatten for his use in preparing a documentation of the FIRESTOP Operation. I enjoyed very much reading your letter and your comments with regard to the program as well as your reference to some of the political problems of our days.

I wanted you to know that I followed up on your suggestion concerning UNOX and find that our research people had already secured a lot of basic information on this product and have found that it has some properties that make it not quite as good as some of the things we are using at present. We are still on the alert for improvements in fire retardants, so it may come back into the picture as improvements are made in its quality.

Again, I would like to say thanks for your efforts in getting the material on FIRESTOP back to us and to express my appreciation for the opportunity to have talked with you, even though it was rather briefly, during your recent visit to California. In the event that the Division does put on an air show or anything that I feel would be of interest to you concerning the use of aircraft in firefighting, I will certainly keep you appraised.

Wishing you the best,

Joe

JOSEPH C. SPRINGER
Deputy State Forester

JCS:1

State of California

The Resources Agency

Memorandum

To : L. A. Moran, Director
Attention Chief Schori
Dave Beall

Date : April 4, 1978

Telephone: ATSS ( )
( )

From : J. C.Springer, Chief
Department of Forestry

Subject: FIRE PROTECTION
General
Operation FIRESTOP
Region VI

Some time ago, Colonel W. F. Schroeder called from Dearborn, Michigan, to ask if there were any opportunities to get involved in fire research as it relates to the use of aircraft on the California scene. He had worked with Deputy Mace during Operation FIRESTOP and still has a keen interest in continuing some input with regard to some of his original ideas on the use of aircraft in fire control.

On March 28, he dropped into the office to further discuss some of his ideas, one of which was to utilize some type of prefab safety tent that could be dropped to people who were trapped in the part of a fire; this would allow them to get inside, with oxygen being supplied to them within the package, etc.

Colonel Schroeder is very much interested in old aircraft and is particularly interested in where he might be able to secure either the aircraft or parts from which he might be able to put together the following types of aircraft: F7, F7F, and Corsair. In fact he would appreciate any information that we might be able to provide to him on the whereabouts of any and all types of WW II aircraft. I advised him that we had phased out the F7 and F7F from the Department's air fleet and that I was unaware as to what procedures were used in disposition of the aircraft. He requested that if anyone in our organization could advise him as to where he might be able to locate these aircraft, he would be most appreciative. He moved recently, and his new address is 6334 Lagune Drive, Gladwin, Michigan 48624.

He is currently visiting friends and relatives in southern California and probably will not return to his residence for another two to four weeks. If anyone in our air wing has any information regarding the aircraft mentioned above on any other WW II aircraft, I would appreciate it if it were forwarded to Colonel Schroeder.

J. C. Springer

JOSEPH C. SPRINGER
Chief, Region VI

1
cc: Colonel Schroeder

Wednesday

Myron & Rosa

Enclosed is a letter of appreciation from The California Forestry for the work I did in proving a "quick drop" could be made from an aircraft. I was the "first" to do so laying 2" foam on 3 sheets on the ramp at El Toro using an AD Skyraider which I flew in Korea.

Now I will try for our Nation's 4th highest award or maybe it's the 5th, Defense Service Award. I have nothing to lose. Another medal will put me over the 2# load of medals on my dress blues.

Pokes Time Myron,
Mail letter* Citation letter to Joyce

See you
Grandson

*Copies

STATE OF CALIFORNIA—THE RESOURCES AGENCY

Pete Wilson
GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF FORESTRY AND FIRE PROTECTION
2524 MULBERRY STREET
RIVERSIDE, CA 92501
(714)782-4140

February 7, 1991

Lt. Colonel Warren F. Schroeder
USMC (Retired)
6779 Colb Street
Allen Park, Michigan 48101

Dear Colonel Schroeder:

It is with great pleasure that I am able to present you with the enclosed "Certificate of Appreciation" for outstanding performance on behalf of the citizens of California and the California Department of Forestry and Fire Protection.

The enclosed certificate is being issued for your efforts during the earliest stages of the development of the aerial fire retardant delivery system we now have. My information indicates that during the years 1953, 1954, and 1955, you were able to develop and demonstrate the feasibility of delivering water with a foaming agent from a fixed-wing aircraft fitted with a fixed tank to a potential forest fire situation. Although others were working toward the same goal at about the same time, there is no doubt that your efforts greatly influenced the decision makers who ultimately guided us toward having the substantial fixed-wing airtanker fleet currently at our disposal.

In closing, let me say that I regret the long delay in recognizing your valuable contribution to modern forest fire fighting technology, and that I wish we could have arranged a more formal presentation.

Sincerely

James G. Dykes

JAMES G, DYKES
Chief, Region III

JGD:lr
Attachment

RESOURCES AGENCY

The California Department of Forestry

Extends This

CERTIFICATE of APPRECIATION

To

Warren Frederick Schroeder

Lt. Colonel, U.S. Marine Corps (Ret.)

For outstanding performance on behalf of the citizens of this state and the California Department of Forestry

STATE OF CALIFORNIA — THE RESOURCES AGENCY — DEPARTMENT OF FORESTRY

DATE February 4, 1991

James B. Eyles

For the DIRECTOR–Department of Forestry

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