U.S.S. ESSEX (CV9)
c/o Fleet Post Office
San Francisco, Calif.

CV9/A16-3
Serial: 0147
18 Dec 1951

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CONFIDENTIAL
SECURITY INFORMATION

From: Commanding Officer
To: Chief of Naval Operations
Via: (1) Commander Carrier Division ONE
(2) Commander SEVENTH Fleet
(3) Commander, Naval Forces, Far East
(4) Commander in Chief, U. S. Pacific Fleet

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS
DOD DIR 5200.10

Subj: Action Report for the period 1 November to 14 December 1951

Ref: (a) OpNav Instruction 3480.4

Encl: (1) CarAirGrp FIVE Action Report, 1 Nov - 14 Dec 1951 p.16

1. In accordance with reference (a), the action report for the period 1 November to 14 December, 1951 is hereby submitted.

PART I COMPOSITION OF OWN FORCES AND MISSION:

1. At various times during the period of this report, Task Force 77 was composed of the following units: USS ESSEX (CV9), ComCarDiv ONE, RADM. J. J. PERRY, USN, embarked, USS BON HOMME RICHARD (CV31), ComCarDiv THREE RADM J. J. CLARK, USN, embarked, USS ANTIETAM (CV36), USS VALLEY FORGE (CV45), ComCarDiv FIVE, RADM F. W. McMAHON, USN, embarked, USS WISCONSIN (BB64), ComSEVENTHFleet, VADM H. M. MARTIN, USN, embarked; USS LOS ANGELES (CA135), USS ROCHESTER (CA124), USS ST. PAUL (CA73) ComCruDiv ONE, RADM E. E. STONE, USN, embarked, USS HELENA,(CA75), ComCruDiv THREE, RADM R. E. LIBBY, USN, embarked, and units of Destroyer Division 111, 151, 152, 122, 31, and Escort Destroyer Division 11, 12.

2. During the subject period, the USS ESSEX (CV9) operated off the East coast of Korea in accordance with CTF 77 Operations Order No. 22-51 (First and Second Revisions), plus supplemental plans and orders issued during the period.

The Mission of TF 77 was, primarily, to support the United Nations ground forces in Korea, which were advancing north of the 38th parallel. The support missions included close support, deep support, armed and photographic reconnaissance, interdiction of enemy supply lines, and strikes against enemy installations.

PART II CHRONOLOGY:

1 November Enroute to Yokosuka, Japan from Operating Area, in accordance with COMSEVENTHFLT confidential dispatch 250816Z Oct.

2 November 1542, anchored berth 3B, Yokosuka, Japan.

3 November 0805 moored starboard side to, Piedmont Pier, Yokosuka, Japan.

4-11 November Yard availability, rest, and recreation period, Yokosuka, Japan.

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12 November	0603 pursuant to Com7thFlt confidential dispatch 250816Z Oct. 1951 underway in company with USS HELENA, for operating area. 0815 RVU with DesDiv 111. Conducted AA firing practice.
13 November	Conducted flight familiarization training. Conducted AA firing practice.
14 November	Conducted large drone firing exercise. Joined TF 77, ComCarDiv THREE (embarked in USS BON HOMME RICHARD (CV-31)) was OTC. Conducted AA firing practice.
15 November	Launched early morning hecklers and ASP. Rest of schedule cancelled due to weather. TF replenished in late afternoon and evenning.
16 November	Conducted Air Operations. Conducted AA firing practice.
17 November	Conducted Air Operations. 0825I, AD, BUNO. 123923 power stalled on takeoff and crashed, pilot (LT W. A. BRYANT Jr.), not recovered, presumed dead.
18 November	Conducted Air Operations.
19 November	Conducted Air Operations. Conducted AA firing practice.
20 November	Conducted large drone firing practice. TF replenished.
21 November	Conducted Air Operations. 1630 F4U, BUNO. 97515, was hit by enemy AA fire, pilot was required to ditch his aircraft over Wonsan Harbor. Pilot (LT B. C. PRUITT) was rescued by LSMR 404.
22 November	Conducted Air Operations.
23 November	TF attempted to replenish but, due to heavy seas replenishment was discontinued.
24 November	TF replenished.
25 November	Due to weather at TF and over target, all Air Operations cancelled.
26 November	Due to weather at TF and over target area all Air Operations cancelled.
27 November	Conducted Air Operations. 1206 Lost AD, BUNO. 123974 over Wonsan Harbor, pilot (LTJG E. HALE) presumed dead. Tail fin came off 250# bomb and carried away arming wire leaving tail fuze armed, attempt to jettison was unsuccessful. Pilot bailed out but disappeared from view shortly after ladning in water. Extensive search by remainder of flight, destroyer, and SAR from Army proved fruitless.
28 November	Conducted Air Operations.

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29 November Conducted Air Operations. LT D. MARSHALL, VF-51, made 41,000 landing on USS ESSEX. 1630I, RADM J. PERRY, ComCarDiv ONE, relieved RADM. J.J. CLARK, ComCarDiv THREE as OTC. 1630 USS BON HOMME RICHARD (CV-31) departed from Task Force enroute to Yokosuka, Japan for further routing to CONLUS.

30 November TF replenished. Conducted AA firing practice.

1 December Conducted Air Operations. 0915, F4U, BUNO. 62931 hit by enemy AA fire, ditched in Wonsan Harbor. Pilot (LTJG E. C. GARRETT) was rescued by USS McGINTY DD-365. No injuries were sustained. 0945, F4U, BUNO. 97504 hit by enemy AA fire, ditched in Wonsan Harbor. Pilot (LT N. E. CURRY) was rescued by SAR vessel. Pilot was not injured.

2 December Conducted Air Operations. 1023, 1 F4U-5NL, BUNO. 124554 lost power on launch and landed in the water ahead of the ship. Pilot (LTJG R. S. DONOVAN) was rescued by the ship's helicopter. No injuries sustained.

3 December Conducted Air Operations.

4 December Task Force replenished.

5 December Conducted Air Operations. The following dispatch received from CTF 77, "THE FOLLOWING MESSAGE FROM COM7THFLT IS PASSED WITH PLEASURE TO THOSE WHO REALLY DID THE WORK X QUOTE X THE QUICK CHANGE FROM BLACK TO RED ON THE INTERDICTION MAP IS A PLEASING COLOR CHANGE X UNQUOTE. This message was addressed to ESSEX, ANTIETAM, CAG-5 and CAG-15.

6 December Conducted Air Operations.

7 December Conducted Air Operations.

8 December Task Force replenshed.

9 December Conducted Air Operations. 0810, AD4, BUNO. 122342 hit by enemy AA fire, ditched over Wonsan Harbor. Pilot (LT F. J. O'MALLEY) was picked up by USS EVANSVILLE. No injuries sustained. 1500, AD4, BUNO. 122325 hit by enemy AA fire, ditched in Wonsan Harbor. Pilot (LT F. J. PENDERGAST) picked up by USS McGINTY DD-365. No injuries sustained.

10 December Conducted Air Operations.

11 December Conducted Air Operations.

12 December Task Force replenished. 1558, RADM F. W. MCMAHON, (ComCarDiv FIVE relieved RADM J. J. PERRY (ComCarDiv ONE) as OTC. 1600, Pursuant to ComSeventhFlt confidential dispatch 060900 Dec. ESSEX in company with ROCHESTER, DESDIV 111 detached from TF 77, to proceed to Yokosuka, Japan for upkeep and recreation. ComCarDiv ONE embar

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13 December Enroute to Yokosuka. Conducted AA tracking exercise with aircraft, flag hoist drill using ACP 175, voice and CW drill.

14 December 1510, Moored Piedmont Pier, Yokosuka, Japan.

PART III ORDNANCE:

1. Expenditure of Air Ordnance.
See enclosure (1)

2. Expenditure of Ship's Ordnance for training.

a. For the period 1-30 November 1951.

5"/38 AAC Projectiles	254
5"/38 Non Frag Projectiles	130
5"/38 Cartridges, non-flashless	384
3"/50 VT Cartridges, non-flashless	686
3"/50 VT Non Frag Cartridges	576
20MM AA	5566
20MM BL&P	140

b. For the period 1-14 December 1951.

There was no expenditure of ammunition for training purposes for this period.

3. Comments on Performance of Ordnance.

a. Performance of Ship's Ordnance Equipment.

(1) During the period of this report, the ever increasing accent on gunnery readiness has reflected itself in the conduct of frequent anti-aircraft gunnery exercises. The performance of ordnance material on such occasions has been gnerally satisfactory with the exception of a few minor casualties in the 3"/50 caliber RFTM battery. Although minor in nature, the following casualties are considered worthy of comment because certain functions of a mount are inoperative due to the non-availability of spare parts:

(a) Slide lock (Pc 612221-1). This small machined part, which prevents a cartridge from bouncing out of the gun chamber when its is catapulted into the breech, broke while conducting a prefiring check-off routine on one mount. Although the ship is authorized to carry 5 spares, the commissioning allowance, (due January 15, 1951) has never been received. Besides receiving general mention in the precommissioning weekly progress reports for a period of 2 months, this item was listed as a deficiency on the spare parts discrepar list submitted prior to the ship's departure for the shakedown cruise. Follo up correspondence initiated prior to departure from Puget Sound Naval Shipyar (post-shakedown availability, 24 May, 1951) San Diego (readiness for WESPAC,

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28 June, 1951) and PearlHarbor (enroute WESPAC, 8 August 1951) likewise produced negative results. Dispatch requests have indicated that spare slide locks are not available in Task Force 77, Service Squadron 3, nor Fleet Activities, Yokosuka Naval Base. According to information from the Ordnance stock Office, Washington, D.C. this part was shipped from the Naval Gun Factory on 20 September, 1951. Although the lack of this part renders on barrel of one 3"/50 caliber twin mount inoperative for routine firing practices, a replacement has been fabricated by the ship's repair force in accordance with applicable ordnance drawings. Since this temporary slide lock lacks the requisite degree of metal hardness set forth in the specifications, it is believed that the working edge would prematurely peen off by frequent contact with cartridge lips during extended operation. Considering the calculated risk in time of action, the value of one more firing barrel would logically take precedence over the potential possibility of a jammed cartridge anticipated with a complete failure of an improvised slide lock. During the previous war, common breakage parts for rapid firing mounts were far more in abundance.

(b) Parallax follow-up motor (Pc 480753-1). At the present time, the windings of two motors are burned out. In this instance also, there are no replacements available in the area. Although earlier allowance lists authorized the ship to carry 2 spare units, the latest modification to the list has reduced the allowance to zero. Based upon previous service experience, this command recommended a shipboard allowance (CV) of 4 spare units (CO USS ESSEX (CV-9) rest airmail ltr, X13, ser 742 of 20 June, 1951). This recommendation was based upon estimates considered essential to ensure operation over a six months period. Actually, the present situation leaves one mount without corrected horizontal parallax. This is by virtue of the fact that the parallax follow-up motor in Mount 37 is superfluous and thereby available for use as a spare. Inasmuch as this mount is located a mere 6 feet from the reference point (MK 37 Director, No. 2), the parallax corrector is normally locked on zero. Until recently, the ship was able to keep abreast of failures in this category by using the unit from Mount 37 while a deficient motor was in the shop for rewinding.

(2) It is strongly recommended that adequate levels of spare parts for the 3"/50 caliber RFTM batteries be maintained on service vessels, and at repair activities in the WESPAC area. In this respect, the significance of the provision of an essentially complete commissioning allowance cannot be overstressed. It is believed that all activities connected with the original outfitting of ships should give this item much greater priority than it has customarily allotted. In additon to the previously mentioned spares, the following parts are considered critical due to their compartively high breakage rate:

(a) Shell support latch, rear	PC 611250
(b) Stud, shell support latch	PC 611255
(c) Cam, breech opening	PC 365243-1
(d) Tray finger mechanism, adjusting end	PC 610869-1
(e) Shaft, operating	PC 510722-1

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Of the above items, the first four were also recommended for increased allowances in the letter mention in subparagraph (b) of part (1) above. The operating shaft-item 5 above - was last reordered 1 October, 1951, and the Ordnance Stock Office, Washington, D.C. has indicated that the tentative delivery date for this item is 1 March 1952.

b. Performance of Aircraft Ordnance Equipment.

(1) Bomb vanes breaking loose from the hold down collars due to poor spot welds continue. BuOrd has directed using M000A1 or AN-M000A1 type vane. It is strongly recommended that this type vane be made available in quantities as soon as possible.

(2) Due to the great volume of munitions handled to date, bomb handling equipment has been subject to considerable wear. Spare straps for MK 1 skids and eccentric binders for 250 GP bomb adapters are urgently needed. Requests for these items have been submitted. It is recommended that a 100% spare strap allowance be established.

(3) No. 1 upper stage 16,000 lb. bomb elevator has 1,211 operating hours and requires constant maintenance. The instruction manual received from BuShips lacks the necessary drawings and wiring diagrams required for proper maintenance of this elevator. It is strongly recommended that these drawings and diagrams showing incorporated changes be made available as soon as possible.

(4) A small percentage of 1,000 lb GP, 250 lb. GP, and 100 lb. GP bombs with bent and flattened lugs and broken and frozen noseplugs have been received aboard. It is impossible to hang or fuze bombs in this condition. More careful inspection of bombs on the replenishment ship is recommended.

(5) Preheated gasoline (heated by steam heater constructed aboard) for mixing napalm is being used in cold weather with good results.

(6) The following is a complete list of hung ordnance experienced during this period:

3 - 250 lb. GP bombs on MK 55 bomb racks; cause, defective rack.

2 - 250 lb. GP bombs on MK 55 bomb racks; cause, undetermined.

2 - 260 lb FRAG on MK 55 bomb racks; cuase undetermined.

3 - 250 GP bombs on MK 55 bomb rack; cuase, frozen racks.

1 - 1000 GP bomb on MK 51 bomb rack; cause, frozen rack

1 - 500 lb GP bomb on MK 51 bomb rack; cause, MK 8 shackle release. mechanism jammed by loose desconnected plug.

1 - 250 lb GP on Aero 14A bomb rack; cause, electrical cannon plug inside Aero 14A launcher separated in flight.

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PART IV BATTLE DAMAGE.

1. Ship

a. During the period of November 22-28, minor structural failures were discovered and repairs made by the ship's force. The damage was caused from working of the ship in heavy seaways, and is enumerated below:

(1) Damage Control Void, A-50-V, developed a 36 inch split seam along the after top edge of the sea chest.

(2) Chain Locker, A-601-E, developed a 14 inch fracture in strake No. 7 on the port side of the chain locker.

(3) Passageway, A-205-1L, developed a fractured butt weld on the longitudinal beam at frame 27 on the starboard side of the 2nd deck. The beam also slightly buckled between frames 27 and 28, and between frames 23 and 24.

(4) The Forward Peak Tanks.

(a) A-1-W had deck slightly buckled between frames 1 and 4 at the third bottom level.

(b) A-2-W had longitudinal and vertical stiffners were slightly buckled at frames 7 and 8.

(c) A-701-W had the transverse bulkhead slightly buckled between frames 10 to 14.

(5) Bosn's Store, A-401-A, and A-501-A had the deck buckled at frame 8.

(6) Four (4) roller curtains were damaged on the morning of the 26th when a series of three waves hit the port side of the ship between frames 70 and 100, while making a turn to the starboard. Three of the roller curtains, between frames 83 and 94, were torn from the forward roller tracks but were not ruptured. The roller curtains were shored to prevent further damage until repairs were accomplished.

2. Damage Inflicted on the Enemy.
See enclosure (1)

3. Damage inflicte on ESSEX aircraft.
See enclosure (1)

PART V PERSONNEL PERFORMANCE AND CASUALTIES:

1. Performance.

Under the present heavy workload of continuous operations, the performance of all personnel has been excellent and morale has been a factor requiring no special attention.

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2. Casualties.

a. Ship's company.

There were no casualties to ship's company personnel.

b. Air Group FIVE

Casualties in Air Group FIVE are as follows:

BRYANT, W. A., Jr.	LT	442481, USN.	Lost in crash after takeoff.
HALE, E. B.	LTJG	506261 USNR	Lost in action.

There were no wounded or missing.

PART VI COMMENTS.

1. Engineering

a. The Engineering Department experienced no casualties during this operational period.

b. Recommendations.

(1) Roller Curtains; shoring of.

In order to expedite the shoring and strengthening of the roller curtains during periods of heavy seas, ship's force plans to install clips on the vertical curtain guides to faciliate the installation of shoring timbers.

(2) Whip Antenna Counterweights.

The counterweights of the forward whip antennas, frames 48 and 53 starboard, which extend down approximately four feet below the antenna platform, have been damaged by the burtoning lines on several occasions. In order to avoid future damage to these counterweights, ship's force intends to modify the weights on antennas #2-2, and #2-3 so that they can be swung up out of the way during replenishment. This will be accomplished by removing one bolt from the weight support and replacing it with a removable pin. The weight can then be pivoted around the remaining bolt, and pulled up by a lanyard.

c. Steaming Data.

(1) For the period 1 November to 30 November, inclusive.

Miles steamed	7959
Fuel Oil received from tankers	1,631,134 gal.
Fuel Oil delivered to destroyers	153,172 gal.
Fuel Oil consumed by USS ESSEX (underway)	1,631,134 gal.

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Fuel Oil consumed by USS ESSEX (anchored)	73,650 gal
Average speed	16.3 knots.

(2) For the period 1 December to 14 December, inclusive:

Miles steamed	5,371.5
Fuel Oil received from tankers	816,703
Fuel Oil delivered to destroyers	165,004
Fuel Oil consumed by USS ESSEX (underway)	808,850
Average Speed	16.41 Knots

2. AIR DEPARTMENT

a. Catapult and Arresting Gear.

During the period of this report, catapult and arresting gear operations were normal with the following exception. On 12 December, during a pre-dawn night heckler launch off the port catapult, both catapult hooks tore completely out of an AD-4Q aircraft. The failure occured almost immediately after firing the catapult and the pilot stopped the plane about halfway down the catapult track. There was no failure of either the bridle, or of bridle tensioning. Catapult pressure was 1500 psi and wind over the deck approximately 35 knots. The gross weight of the plane was approximately 17,500 lbs. Cause of the failure has not as yet been determined. RUDM's will be submitted by VF-54

b. Flight Deck Operations.

The complement of aircraft aboard this vessel during the first three weeks of operations in this period averaged 77. This had several adverse effects on overall efficiency of flight deck operations. Additional planes had to be carried on the flight deck, resulting in a reduction of the bomb load on AD aircraft by 1,000 lbs. due to the shorter take-off run available. Duds were handled with difficulty because of lack of dud space on the flight and hangar decks. During the latter part of the period this particular problem was alleviated somewhat by launching 17 jet aircraft and an average of 12 to 14 propeller aircraft. The requirement that the ship be able to recover six planes besides its complement could not be met without parking three aircraft on the No. 5 and No. 6 barriers. While maintaining a "ready deck" with 77 planes aboard, the hangar deck was two blocked and maintenance of aircraft, especially jets, suffered due to the aircraft being spotted very close together in all bays.

Replacement of AD-4 with AD-2 aircraft has resulted in manufacturing of six "Z" type tow bars during this period. There are now a total of twelve aboard, six on the hangar deck, and six on the flight deck.

During this period, it has become necessary to increase the number of tie-downs on aircraft because of higher winds and heavier seas. Hurricane cables are put on the planes almost every night in addition to the normal 16 point tie-down. It has been necessary to order additional mooring assemblies (come-alongs) in order to faciliate securing of aircraft.

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c. Operating Data for November and December 1951

	1-30 November	1-14 December
Arrested Landings	702	774
Catapult Shots (starboard)	156	225
Catapult Shots (port)	179	219
Gasoline, (gallons)	358,635	462,504
LubOil, Symbol 1100	1,800	2,513
LubOil, Symbol 1010	1,528	4,586

3. NAVIGATION

A series of radar repeaterscope photographs were taken during the ship's departure from Yokosuka, Japan. A study of these photographs revealed numerous targets especially suitable for radar navigation. These photographs, properly notated to identify the targets, will be used when planning to make an entry or departure under low visibility conditions.

4. AIR OPERATIONS

a. Racon

One change was made to the wiring for the Racon (AN/CPN-6) gear. Since the controls for starting and stopping were located, along with the equipment, at the 010 level, there was considerable delay in assuming the guard and no assurance that the gear was operating. Two of the four (4) unused wires in the YE control box, which is located in AirOps were connected to a switch and light and mounted on the YE control box.in AirOps. The upper ends of the wires are connected to the Racon. It is now possible to turn on the Racon from Air Operations, and the glowing light indicates that the gear is operating.

b. Radio Homer

Steps are being taken to construct an automatic keying device for the "Bird Dog" or radio homer. There appears to be no device furnished to ships for this purpose. Ship's in the past either constructed their own, or were forced to have a radio man available the entire day for this purpose.

If this device proves successful, Air Operations will have control of the YE, Racon, and the Radio Homer, the three required for navigational purposes, all centrally located in Air Operations Spaces.

5. COMMUNICATIONS

a. CW Circuits.

During the third period for the ESSEX in the Korean operating area, no new communications problems were encountered. The situation in regard to radio CW circuits has remained unchanged. This command forwarded a recommendation via the Task Force commander suggesting that the area commander reassign frequencies for both the CW and voice circuits with Joint Operations

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Center, Korea (guarded by 5th AF HQ, Korea). It was recommended that another daylight frequency for CW (retaining the present frequency for night transmissions), and a new night frequency for the voice circuits be assigned.

b. Tactical Circuits.

The disadvantage of employing the secondary tactical (radio-telephone) frequency for other purposes (screen common, administrative, and gunfire control has continued to lessen the effectiveness of this circuit, particularly when the circuit has had to be used in lieu of the primary tactical frequency as during periods of operational maintenance.

c. Interference

During this period, attempts have been made to eliminate interference on both tactical circuits as a result of "splash-over" of the VHF frequency employed for air strike control. By interchanging receiver equipments, and thus shifting associated receiver antenna leads, some improvement has been noted. Interchanging crystals within (TDQ Model) transmitters has also been effective in reducing a portion of the interference. This problem is a part in reducing a portion of the interference. This problem is a part of the over-all program of shipboard radio interference reduction to be completed prior to the ship's next yard availability.

d. Ratt

Encouraging results have been obtained in radioteletype communications for this period. DUPLEX operations with NDT and Com7thFlt have been very satisfactory for the first time since the ESSEX reported to the Operating Area. The circuit assigned exclusively to the task force flagship for ship/shore radioteletype has proved highly satisfactory, although it appears that in the near future this circuit will be shared again with another task force command (CTF 95 when at sea). For a carrier flagship, sharing the circuit has one outstanding disadvantage of limiting time on the air to the extent that, combined with outages due to atmospherics, the value of radioteletype for clearing the heavy volume of ship/shore tarffic is considerably reduced. The disadvantage arises primarily from the loss of transmitting time resulting from periods when antennas must be "de-energized" for flight, fueling, and arming operations.

e. Facimile

Facsmile schedules with the Radio Photo Unit stationed at NPG were highly satisfactory during this period. Prints of photo coverage of the visit of front-line G.I.'s to the ship over Thanksgiving have been returned to the ship and help to establish the value of this type of transmission for public information and morale purposes.

f. Personnel.

With the release to inactive duty and transfer of both officer and enlisted personnel, communications will be hardest hit in the cryptoboard and signal (EM) sections. For ships reporting to the operating area,

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it is again emphasized that personnel needs must be anticipated as far in advance as possible. In any event the training program must be of such a nature as to provide replacements for key personnel who are for one reason or another transferred from the command.

6. LOOKOUTS

The Lookout Division has been undergoing vigorous training. In addition to regular classes in recognition, sound-powered telephone talker procedures, and duties and responsibilities of lookouts, the men are also studying for rates which they will strike when transferred to a division of their choosing. The procedure has been established for the majority of seamen and seamen apprentice reporting aboard to be assigned to the Lookout Division. By doing this, the men have two to three months in the division during which time they can observe the duties of various rates on board and decide for which division they would be best adapted. This procedure is followed insofar as possible.

All men assigned to the division undergo eye examinations prior to assignment. All must have 20-20 vision and normal color perception to qualify for assignment. This requirement was made necessary because too many man were found with defective vision when the Lookout Division was first formed.

7. AIRBORNE EARLY WARNING.

The PO equipment has been used to advantage to give the ship's CIC a bird's eye view of the Task Force and surrounding area. Surface contacts consisting of three or more ships have been detected at ranges of over 90 miles from the ASP aircraft. Single ships to a slightly lesser range have been detected depending upon ASP altitude and atmospheric conditions.

The PO picture has also been used to determine wind direction, as well as to show a plane view of weather build-ups in the task force area.

At times, the relayed AN/APS-20A PPI picture has been able to supply excellent information on air contacts. Despite the low altitude of the ASP aircraft it has picked up returning strikes and jet CAP at altitudes over 20,000 feet as a result of reflection from the water.

8. AIR INTELLIGENCE.

Air GroupFIVE has now completed three full months in the Korean Operating Area using the original charts issued covered with frisket paper. As far as can be determined the charts show all indications of being fully useable for another operating period.

9. PHOTOGRAPHY.

a. K-25 Strike Photography.

K-25 damage assessment photography posed several problems.

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These have been ironed-out, in part, through pilot orientation and through continued maintenance.

Pilots, understandably, have a tendancy to use a mounted camera much the same as a gun. Use of the K-25 must be much more precise than gunnery in order to achieve clear sharp pictures. The aircraft must, at the time the camera is energized, be completely free of any forces acting upon it. The target must be sighted dead on and approached directly along a tangent which will render the camera less efficient. Maneuvers such as "pull outs" sweep the ground area across the field of view at a high rate. This coupled with the forces acting upon the camera creates undesirable results. Acceleratio in a dive also creates a negative force which acts directly against the cameras weakest point.

The pressure plate in the K-25 is the primary weak spot when the camera is mounted in an aircraft. It is forced downward by cam action to hold the film flat and free of flutter. Flat springs act as a buffer to the cam action and also distribute the action evenly upon the plate. The springs, while of sufficient strength under free operation, are not strong enough to oppose the afore mentioned forces.

The shutter mechanism is a closely arranged mechanism and poses another problem, that of maintenance. Vibration of the aircraft when the camera is tripped bounces the parts so that their swing is not always 90° from their pivot points. When this occurs, breakage is almost certain to result.

It should be noted that guns must not be fired during camera operation. The laboratory has had to repair at least one camera a day and usually two or three. During the first month of usage the cameras showed no tendency toward breakages. The second and third month breakages at an increasing rate. The following is recommended:

1. Maintain close contact with the pilots using these cameras. Their complete understanding of the problems and techniques is of primary importance.

2. Carry spare parts for the K-25 shutter.

3. Make slight machining alterations on shutter parts.

4. Include a qualified camera repairman in ship's company.

RECORD OF K-25 STRIKE PHOTO VF-54

16 November through 11 December 1951

Rolls taken	58
Total Possible exposures	1375
Total Exposures taken	1132
Total usable exposures	694
Total unsuable exposures	407
Total prints filed	124

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Rolls not used due to poor techniques 4
Prints made 8 x 10 1736

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b. COPYING, USING PAPER NEGATIVES

A large number of copies are being produced by the use of paper negatives. Sensitized material used for the paper negatives is standard stock enlarging paper, contrasts 0 through 4. For the reproduction of photographs and outdoor photographs contrasts No. 2 has been found satisfactory. For reproduction of charts, line maps, and drawings contrast No. 4 has been found satisfactory. Outdoor exposure in bright sunlight, with contrast No. 2 is approximately 1/50 sec at F 4.5. Copy work with two No. 2 photo-flood lamps is approximately 25 sec. at F 22. After the paper negative is developed, fixed, and washed it is dried on the glossy print dryer in the conventional manner as S.W. glossy prints.

Since recommissioning the photographic laboratory has been required to produce a large number of reproductions. Many of these reproductions required only a few copies with no use for the negatives. A large number of these reproductions have been of charts, drawings and sheets of figures whereby computations would have to be checked if produced in any other manner. A paper negative may be made, developed, fixed, washed, dried and ready for printing in approximately 30 minutes. Regular negative material requires a much longer time for processing unless given special handling.

Paper negatives are easy to handle, inexpensive and have been found very satisfactory for training photographic strikers in the operation of various ground cameras. The material may be handled under a yellow safelight whereby the beginner may follow the process. The major difference between the paper negatives and film is the sensitivity or speed.

c. PHOTOGRAPHY PRODUCTION RECORD

Third operating period 17 November through 11 December 1951

Total number of photographic missions flown	41
Total number of rolls filed	49
Average number of exposures per roll	70
Total number of negatives used	3,647
Total number of prints made	37,924
	Running Time
Average time to develop and wash film, figured on 52 rolls.	65 Min 1 Hr 5 Min.
Average time to dry film, figured on 52 rolls	36 Min 1 Hr 41 Min.
Average time for first set of grease pencil marked prints delivered to P.I. Officer.	60 Min 2 Hr 41 Min.
Average time to mark one (1) roll of film (computed from time of delivery to film marking, to time returned for distribution printing)	117 Min.4 Hr 38 Min.

[redacted]

[redacted]

DECLASSIFIED

Average time for set of marked prints to Flag (after receiving marked film from film marking)	124 Min 8 Hr 22 Min
Average time for set of marked prints to P.I. Officer (after receiving marked film from film marking)	133 Min 8 Hr 31 Min

All work completed and ready for mailing by 1000 the following day.

PRODUCTION RECORD FOR 1st, 2nd and 3rd OPERATING PERIODS, 24 AUGUST THROUGH 11 DECEMBER 1951.

Total number of missions flown	171
Total number of rolls filed	260
Total number of negatives used	14,726
Total number of prints made	136,173
Average number of exposures per roll	56½

Austin W. Wheelock
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Copy to:
CNO (Advance, airmail) (2)
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COMCARDIV FIVE
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CVG 5 (5)
CVG 11
CVG 15
CVG 101
CVG 102
AIR TASK GROUP ONE

[redacted]