

**THE**  
**UNITED STATES AIR FORCE**  
**759th AIRCRAFT CONTROL &**  
**WARNING SQUADRON**  
**AT**  
**FORT STEVENS, OREGON.**  
**1950-1951**

**PREPARED BY**  
**THE FORT STEVENS MILITARY MUSEUM**  
**THE FRIENDS OF OLD FORT STEVENS**

# THE UNITED STATES AIR FORCE AT FORT STEVENS, OREGON. 1950 - 1951

The demise of Fort Stevens, Oregon as an active United States Army Coast Artillery installation occurred after the end of World War II. In the years that followed this "base closure" and as the "Cold War" tensions increased, planning was underway to use the facilities again at the historic Fort. This time Fort Stevens would be utilized by the United States Air Force as one of the sites for the active air defense of the United States and the Pacific Northwest.

## PART I - GENERAL HISTORY

On 27 November 1950, the 759th Aircraft Control and Warning (AC&W) Squadron was activated at Ft. Stevens, Oregon. The authority for this activation was Western Air Defense Force, Hamilton AFB, CA., General Order Number 40, dated 20 November 1950. The squadron was authorized 16 officers and 179 airmen with Capt. John W. King the first commanding officer.

The 759th AC&W Squadron became part of the 505th AC&W Group, 25th Air Division, then located at Paine Field and Silver Lake near Everett, WA.

The specific US Air Force geographical designation for this AC&W radar location was: Ft. Stevens, OR., (6th Army) 5 miles NW of Warrenton, OR., site L-36, 25th Air Division, former Coast Artillery installation.

The 759th AC&W Squadron airmen lived in the old NCO barracks since most of the buildings from WW II had been torn down. The "Guard House" building was used as the squadron headquarters and orderly room, while the "Jail" area in the rear of the building was squadron supply.

The squadron radar "Operations" area was in one of the underground rooms at Battery Mishler. These rooms can still be seen today but all the radar scopes, plotting boards, high frequency (HF) and very high frequency (VHF) radio communications and telephone switchboard equipment has long since been removed. The operations call sign for the squadron while at Ft. Stevens was "Dishpan".

The unit operated a AN/CPS-5D, a medium power long range search radar of WW II vintage, mounted on a 25' tower on top of Battery Mishler.

During the time the squadron was operational at Ft. Stevens, the radar tracked and they plotted and identified on an average of 2450 aircraft targets each month. The range of these "tracked" aircraft was usually from 30 to 200 miles distant. When an aircraft could not be identified, this "track" information was passed by telephone or HF radio to the AC&W Direction Center (DC) at Paine Field, WA., or the AC&W Control Center (CC) at Silver Lake, WA., for further

action. The operations call sign for the "DC" was "Burton" while the operations call sign for the "CC" was "Word".

If the DC/CC were unable to identify the unknown aircraft radar "track", fighter planes from Paine Field, WA., McChord AFB, WA., or Portland AFB, OR., were "scrambled" to intercept the unknown aircraft. The radar intercept control officer (the Controller) at the 759th AC&W Squadron at Ft. Stevens would then vector the fighter aircraft toward the unknown aircraft (the Bogey) for positive visual identification. The great majority of these unidentified aircraft were found to be friendly but outside of their assigned air space. However, the US Air Force Air Defense Command did have fighter and bomber aircraft that would frequently attempt to penetrate and test the air defense detection capability of the Ft. Stevens radar sector and other AC&W sites in Oregon and Washington.

The days of operation were numbered for the officers and airmen at the Ft. Stevens radar site. Construction began in mid 1950 for a larger and more comprehensive radar air defense network in the United States and the Pacific Northwest. The next home for the 759th AC&W Squadron would be at a new radar site on top of a mountain near Naselle, WA., just across the Columbia river north of Astoria, OR.

By December 1951, all the squadron personnel had been relocated to the new active radar site (P-57), operations call sign "Chancellor", and the radar air surveillance function at Ft. Stevens was terminated.

## **PART II - DAY TO DAY HISTORY**

The following information has been extracted from the monthly Historical Reports filed by the squadron commander.

### December 1950

Personnel strength at the end of the month was: 5 officers, 7 civilians and 155 airmen. Key personnel were: Capt. John W. King, Commanding Officer; Capt. Aaron E. Caplan, Communications Officer; 1st. Lt. Harold W. Owens, Electronics Officer; 1st. Lt. Henry K. Schiver, Electronics Officer and 1st. Lt. George R. Hill, Controller.

At the present time records of personnel assigned to this organization are still with the 636th AC&W Squadron. This has created a hardship in making necessary reports to higher headquarters.

### January 1951

There were no changes or unusual difficulties encountered in the administration and organization of the squadron during the month of January. Key personnel additions were: 1st. Lt. C.S. Niewendorp, Adjutant; 1st. Lt. Charles Townsend, Controller and 1st. Lt. William Worley, Communications Officer.

The most critically short items were T/O&E items, especially office furniture and equipment. Some office equipment has been borrowed from the Post Engineers at Ft. Stevens. Other items are on requisition from AF 69 SO, McChord AFB, WA. As of the last day of the month, approximately 5% of the requisitions have been filled. The effects of the shortages on the mission of this organization is a slight delay and inconvenience in carrying out the administrative duties.

Flying proficiency is being maintained at Portland Airport, Portland, Oregon by all personnel on flying status.

Housing facilities at this installation are good at the present time.

For operations, a total of 1945 targets were tracked during the month of January.

An AN/TRC-1 terminal set was installed at Ft. Stevens, OR. and Naselle, WA., and one relay station was installed at the Naselle hill radar site. Two SCR-188 (HF) sets were installed at Naselle.

#### February 1951

No historical report found in file records.

#### March 1951

The main difficulty in the administration of the squadron is the lack of office machinery. Items badly needed for efficient administration are typewriters and a mimeograph machine.

On approximately 3 March 1951, the squadron was authorized by letter from Western Air Defense Force to cut its own special orders assigning officers and airmen to sectional duties and allowing the squadron to promote airmen up to and including the rank of Corporal. This change greatly increased the efficiency of the organization by eliminating the time required to request special orders from the 25th Air Division.

The difficulty in obtaining orders for men being discharged for the purpose of re-enlisting has been cleared up. Some confusion exists due to the fact that men being discharged must still travel to McChord AFB., 7 days in advance. This means many man-hours are lost to the organization.

Key personnel changes were the addition of Capt. Frank K. Mattson, Electronics Officer, T/Sgt. Edward Riordan, Sergeant Major and the promotion of Capt. John W. King, the Squadron Commander, to Major.

Capt. Frank K. Mattson was appointed Service Stock officer on 3 March 1951. A supply conference at McChord AFB, WA., was attended by representatives of Service Stock E on 5 and 6 March 1951. At this conference Service Stock procedures were outlined in detail. During the reporting period supplies were

removed from original spare parts packing cases, inventoried and placed in bins.

There were two ROCP (Radar Out of Commission for Parts) requisitions during the month and satisfactory action was taken by AF 69 SO at McChord AFB, WA. There has been a shortage of Service Stock clerks during January and February but with five airmen now assigned, this problem has been taken care of.

Duty shifts of the radar mechanics have been changed from six hours on and twenty four off to eight hours on and twenty four off. One Philco field engineer is present at all times or "on call". When "on call" the field engineer is available on ten minutes notice.

Specific radar maintenance problems include the shortage of correct exciter brushes for the PU 40 (400 cycle generator on the AN/CPS-5D radar) requiring substitution. Wide variation in line voltage has caused the thermal overload on the PU 40 to trip. This action interrupts operation of the AN/CPS-5D radar for a period of 5 minutes. This has been effectively remedied by raising the thermal overload trip point from 100% to 110% of the rated load.

The seal between the main drive gear box and the antenna drive motor on the AN/CPS-5D radar allows seepage of 90 weight oil from the gear box into the drive motor. The accumulated oil is drained daily from the drive motor. Improper lubrication of the main drive gear box and water seepage caused a breakdown. Preventive maintenance schedules failed to show the lubrication of the upper bearings on the drive shaft in the gear box. This lubrication is accessible only through an inspection plate on the top side of the turntable. Preventive maintenance schedules have been amended to include monthly lubrication.

Breakdown of the AN/CPS-5D radar operational time is as follows (in total hours): scheduled, 744:00; operational, 647.73; authorized maintenance, 14.93; equipment failure 75.17; off due to high wind, 6.15.

On 12 March 1951, a rotation policy was started with the airmen at Naselle, WA., to maintain the proficiency of the 514's (radar scope and plotting board operators) assigned to P-57. Each two weeks, part of the operations crew are rotated so that each airman spends several weeks at Naselle while those at Naselle are brought to Ft. Stevens to work regular shifts at operations.

Radio contact was made on 2 March 1951, with a "Beetle" aircraft which was a special mission aircraft. Azimuth and range was given to the aircraft each minute from this station.

A Big Photo B-29 mission was successfully intercepted by Capt. Mattson on 9 March 1951. A B-50 interception was made on 17 March 1951, by Lt. Townsend. Some friendly "jamming" from the 25th Air Division aircraft (ECM) took place on 22 March 1951 but was weak and ineffective. On 23 March 1951, it was repeated but was still proven ineffective. More friendly "jamming" took place on 26 March 1951, and this time was very effective. It was believed to have been a B-50 aircraft from the Strategic Air Command.

Air operations for March 1951 included 26,670 plots, 2,475 tracks, with an average of 9.90 plots per track and a maximum radar range of 220 miles with an average range of 160 miles. There were 4 attempted intercepts with 3 successful and one aborted along with 2 unidentified tracks.

A practice domestic alert was called on 28 March 1951, at 0400 hours. Some difficulty was experienced in notifying all off-base personnel on the alert. This has been corrected by appointing one off-base airman and an alternate in each nearby community to be responsible for notifying the others in his immediate area.

Maj. King, Lt. Hill and Lt. Niewendorp attended the commanders conference on 22 and 23 March 1951, at Larson AFB, Moses Lake, WA.

#### April 1951

A special 25th Air Division exercise was held for all AC&W units in the Pacific Northwest on 7 and 8 April 1951.

The following interceptions were accomplished by the 759th AC&W Squadron during the exercise. On 7 April 1951 the first interception was started at 0825 (Local Time) when Forego Yellow, an F-82 was dispatched. The aircraft was in control of this station for approximately 45 minutes until 0910 when radar contact was made with the bogey. Planes did not close for a visual check but the plane was identified at MA 0275 (plotting grid coordinate). Lt. Kenneth Sundberg was the controller.

At 1113 Forego 22, an F-94, was sent out to intercept Track 89 at LC 5005 at 25,700 feet. Interception was made at 1128 with the interceptor being in control for 10 minutes. The bogey, reported as a B-50, turned out to be a C-54. Lt. Kenneth Sundberg was the controller.

At 2242 Forego Black was assigned to this control for patrol duty. Control was passed to Sheepman 35 minutes later at 2317. Lt. George Hill was the controller.

On 8 April 1951 Forego Black, an F-82, was dispatched at 0341 and was in control of this station for 21 minutes but no interception was made due to the speed of the bogey. Lt. George Hill was the controller. Another interception failed at 0610 when Migrate 18 was forced to return to its base for fuel. Aircraft was under control of Lt. George Hill for 16 minutes.

An interception of Track 51 at LB 4151 at 24,500 feet was made under control of Lt. Charles Townsend at 1235. Bogey was a B-50 intercepted by Forego 22 (Black), an F-94. Fighter and was under control for 13 minutes.

Interception of Track 57 was accomplished at 1356 when a B-50 was intercepted at 25,000 feet by Forego 25 (Yellow), an F-94, at LB 3441. The controller was Lt. Charles Townsend and the interceptor was under control for 26 minutes.

Track 88, a B-50 at 17,000 feet was intercepted at LA 4038 by Forego Black an F-82 at 2023. Control was started at 1945 and the controller was Lt. Kenneth Sundberg. Darkness prevented the pilot from getting the aircraft tail number.

Forego 22, a T-33, accomplished the interception of Track 85 at 1650 at 7,000 feet. Aircraft was a USAF C-47 at MB 1522. Lt. Kenneth Sundberg was the controller. Aircraft was in control for 34 minutes, from 1630 until 1704.

An interception failed between 2340 and 0200 due to the fact that the bogey was too far away by the time the fighter was airborne. The interceptor dispatched was Forego Red, an F-82. Lt. George Hill was the controller.

Forego Black made an interception of a B-29, Track 12A, at 25,000 feet at 0425 on 9 April 1951. The interceptor was in control for one hour and twenty minutes with control starting at 0305. Lt. George Hill was the controller.

The final interception of the exercise took place at 0627 when a B-29 at 25,000 feet was intercepted at MA 1015. Forego Red made the interception and the bogey bore the aircraft tail number W 78326. Lt. George Hill was in control of the interceptor for 12 minutes starting at 0615.

In general the radar set worked very well during the entire operation. The chief difficulty was that a total of eight crystals were required to keep the set operating at peak performance.

There were 22 cases of radar jamming. Eighteen of these cases were window jamming of which only one had any effect as far as reading targets was concerned. There were four cases of CW jamming. Three of these cases were very effective.

During the exercise, communication on High Frequency (HF) radio between net stations was satisfactory. There was very little change due to atmospheric conditions. Air to ground radio communications was also satisfactory. There was no jamming of VHF radio channels during the exercise. There was no maintenance performed on the radio and telephone communication equipment during the exercise.

In summary, this exercise was much better than the last one. The GCI stations gave much better cooperation during the exercise. However, the fighters were not scrambled soon enough and not on the correct vectors to accomplish interceptions. The radar ECM as a whole was not effective. But it completely obliterated the scopes at times. Would suggest setting up an ECM plotting board at GCI and taking bearings from all stations reporting ECM to get the exact location of the aircraft. This information can be obtained from FLASH reports and can be repeated every few minutes to ascertain the position of the aircraft that is causing the ECM jamming.

There have been no major changes in the organization of the squadron during the month of April 1951.

The function of the administrative section was considerably improved with the receipt of a mimeograph machine. This enables the organization to cut its own orders as authorized by the Western Air Defense Force letter. Previously, the stencils were cut and sent to Tongue Point Naval Station, Astoria, OR., to be reproduced.

The shortage of office machinery was somewhat relieved with the acquisition of another typewriter. However, a shortage of typewriters still exists. The typewritten work of many of the sections falls on the orderly room personnel to perform, creating an overload of work on this section.

The squadron strength now stands at 18 Officers, 194 Airmen and 6 Civilians. The following officers joined the organization: Capt. Lloyd Casselman, Communications Officer; Capt. Robert Cox, Controller and 1st Lt. Dean Jensen, Controller. Capt. Cox and 1st Lt. Jensen had just completed "Controllers" school at Tyndall AFB, FL. 1st Lt. C.S. Niewendorp and six airmen were assigned to an overseas replacement depot to prepare for overseas duty.

Last month a system of changing linen was used in which one airman exchanged linen for his entire barracks or section. This system had to be discontinued after the loss of a set of linen occurred. Each airman now has to change his own linen individually.

Requisitions are in for new trucks and they are expected in the near future. The transportation section also issued 23 drivers licenses during the month.

A major overhaul of the radar set AN/CPS-5D was accomplished with a minimum of spares from Service Stock. This was due to the fact that the majority of spares were procured direct from Sacramento Air Depot, McClellan AFB, CA., by the radar set overhaul team supervisor.

At 0900 9 April 1951 the radar set AN/CPS-5D (Serial No. 74) and the IFF set AN/CPX-2 (Serial No. 132) were taken off the air for major overhaul. The overhaul was directed by Mr. William Gore, Sacramento AMC Depot, McClellan AFB, CA., and three civilian assistants. The overhaul team was assisted by the radar maintenance crew and an operations team.

The following components were replaced in the AN/CPS-5D: PU40 400 cycle generator; PU39 Amplidyne for antenna drive; AM38 Servo amplifier, one for each PPI scope; Main drive gear box; Antenna turn table; Antenna drive motor; Antenna reflector. The waveguide sections were airlifted to the Sacramento AMC Depot for replating. Also the temporary tower shelter was removed and replaced by a prefabricated tower shelter.

The following was accomplished on the AN/CPX-2: Antenna rotation system overhauled; Installed new antenna reflector; Installed new dipole and RF cable assembly and thoroughly cleaned and refinished where necessary.

In general the overhaul was accomplished smoothly and without difficulty. Time for the overhaul and a 24 hour run-in period after the overhaul was 16 days, 7 hours, and 40 minutes. Since overhaul, both sets have been operating satisfactorily.

The effects of radar jamming were reduced materially during the practice exercise on 7-8 April 1951 by shifting the magnetron frequency on the AN/CPS-5D radar set. At all times after this shift had been made, the jamming aircraft could be detected and plotted. The time consumed in making this shift did not exceed five minutes in spite of the fact that this radar set does not have



the MX774 modification kit installed. In all cases the frequency change was made during the absence of targets.

During this reporting period targets have been observed in the seaward direction consistently beyond 200 miles. Maximum distance inland was 212 miles. The unusual long range characteristics of the AN/CPS-5D radar is due largely to its excellent siting, including the following: lack of screening effect; negligible interference; high soil salinity and the smooth ground plane in the seaward direction.

Classes started 24 April 1951 on the AN/FPS-3 radar set. Capt. Harold Owens, having completed the AN/FPS-3 school recently at the Bendix Aviation Corp. factory in Towson, MD., is instructing the course. Present plans are to have school three times a week in two-hour periods for the radar mechanics.

One AN/TPS-1B (Serial No. 412) a transportable short range search radar was received at this station on 25 April 1951. On arrival an inspection revealed that the 400 cycle generators were missing from the two PU51's. All cables for the entire set were also missing. All components were very dirty. The radar set was in deplorable condition, far below Air Force standards. It is planned at present to utilize this set as an On-the-Job training overhaul project for the attached 780th AC&W Squadron and 142nd AC&W Squadron (From Portland, OR., Oregon Air National Guard) personnel. Capt. Owens is supervising this project and the target date for completion is June 1951.

A total of forty-eight 1N21B crystals were used during the month of April. Unsatisfactory reports (UR's) on the subject were submitted. 1N23 crystals were tried with no success. A letter from 25th Air Division DM-1 311.23 states that the manufacturer of the GPA-7 (modification of the AN/CPS-5D radar) is aware of the problems concerning crystal burnout's and is presently designing a new TR box utilizing a new crystal, 1N27. Until such time as the modification is made available, high consumption of the 1N21B crystals is expected.

The BC-522, VHF radio transmitter-receiver, was off the air 1 April 1951 due to an aged selenium rectifier in the RA-62. A replacement rectifier was obtained from McChord AFB. Service Stock by courier and the set was put back in operation.

On-the-Job-Training (OJT) programs at this organization have been increased considerably during the past month. As of 30 April 1951, 109 airmen have been assigned to OJT in 18 AFSC's (Air Force Specialty Code). Most of the airmen are assigned in training for the three and five levels in their Career Fields. The majority of the airmen assigned to OJT have reached the 25% level of proficiency and it is expected that they will reach the 75% level in most cases within three months.

Troop training reached a high level during the month of April. In addition to the required number of hours of drill, inspection, physical training and information, all airmen and officers of this squadron spent four hours on the rifle range. Two hours were spent pulling and marking targets and two hours were spent firing the 30 Cal. M-2 Carbine. The firing took place on the old Coast Artillery firing range just outside the installation and was in charge of M/Sgt. Albert Ncky and Sgt. Leonard Bowe. Firing was over the 100 and 200

yard distances. A total of six airmen qualified for "expert", 33 qualified for "sharpshooter", and 61 qualified for "marksman" making a total of 100 who qualified.

Rated personnel (pilots) maintained flying proficiency at Portland AFB, Portland, OR., during the month.

The following personnel are attending service schools: Capt. George Phillips, AN/FPS-3 radar school at the Bendix Aviation Corp., Towson, MD.; 1st Lt. Richard Shilcott, Controller school, Tyndall AFB FL.; Sgt. L. M. Palmer, Radar Repairman school, Great Lakes NTS, IL.

Housing facilities at Ft. Stevens and Naselle are adequate. The Post facilities at Ft. Stevens are maintained by the US Army Corps of Engineers.

A total of 29 interceptions were accomplished during the month of April 1951. Twenty-five of these were successful and four were unsuccessful. There were numerous Big Photo missions over Portland most of the month on simulated bombing missions. Operations at this station was not active throughout part of the month due to being shut down for a major overhaul for two weeks. The summary for operations for the month was: 10,991 plots, 1,231 tracks with a maximum radar range of 212 miles and an average radar range of 160 miles.

A baseball team has been organized to represent Fort Stevens in the Lower Columbia baseball league. Other teams represented in the league include Astoria, Knappa, Warrenton, Tongue Point Naval Station, Tillamook and Tillamook Moose. Capt. Harold Owens is the manager of the team and T/Sgt. Mike Sherrell is the coach. The first game is scheduled for 13 May 1951 on the Ft. Stevens diamond. A total of \$ 157.02 has been spent from the Unit Welfare fund to defray the expense of uniforms, fees and baseball equipment.

Due to the increase of personnel and personal vehicles at this installation, a windshield sticker has been designed for officers and airmen so that vehicles can be more easily recognized.

Under the supervision of Capt. Albert Hough, I & E officer, a daily publication has been inaugurated at this organization. The publication is titled "The Scope Dope" and is edited by S/Sgt. W.K. Braun. News is obtained from local newspapers and radio and the paper is distributed at the noon meal.

A television set was purchased for the organization from the Unit Welfare Fund. After considerable experimenting at this site, it was found that the signals were inadequate. However, the site at Naselle is very favorable and an excellent picture reception is obtained there at all times. The set is very popular with the personnel.

#### May 1951

There were no significant changes in the organization of the squadron during the month of May.

Administrative work is still bogging down due to the lack of sufficient typewriters. Often administrative personnel are forced to sit idle waiting for the use of a typewriter. Typewriters have been on requisition for several months.

The strength of the organization as of the end of the month was 18 Officers, 212 Airmen and 6 Civilians. Of this strength, 43 Airmen and 1 Officer were assigned at the Naselle radar site.

The UPREL (Unit Property / Equipment List) was forwarded to 25th Air Division 21 May 1951. WOJG. Robert Williams, HQ. WADF, inspected supply on 9 May 1951 and suggested that steps be taken to bring snow removal equipment up to date.

Lt. William Doheny was appointed Transportation Officer and T/Sgt. Samuel Stump was appointed NCOIC of the transportation section. Sgt. Oscar Gaither was transferred to the site at Naselle in charge of transportation there.

Two vehicles have been inoperative during the past month due to lack of parts. One 2 1/2 ton truck needs a rear wheel bearing and another 2 1/2 ton truck needs a new clutch bearing plate. These parts have been on order for over a month.

There were no changes during the month in the radar maintenance organization, nor were any specific major maintenance problems encountered. During this reporting period, the practice of rotating the TR tube 1B23 in the cavity every 48 hours of radar set operation about 45 degrees, was initiated. Rotating the tube periodically appears to increase the length of life of the tube by causing the electrodes to burn more evenly. If the tube is not rotated it is possible to see one side of the radio-active coated target electrode burned and pitted. Rotating the TR tube has resulted in a marked increase in its life. At this time it is impossible due to insufficient data to indicate accurately to what extent tube life is extended.

It was planned to instruct the airmen of the 142nd AC&W Squadron, recently called into active Federal service from the Oregon Air National Guard at Portland AFB., Portland, OR., during the month. Subject airmen were given tests in mathematics and electronics but were available for only one day of instruction. The 142nd AC&W Squadron was scheduled to overhaul the AN/TPS-1B radar set, serial number 412, as part of their training. Because of a change in their orders to an overseas assignment, the 142nd AC&W Squadron radar personnel were unable to start this project. Overhaul of the set was accomplished by radar maintenance personnel of the 759th AC&W Squadron. The AN/TPS-1B was set up and tested on 26 May 1951. Tests indicated several minor troubles. It is presently planned to transfer the set to its operating location on 4 June 1951.

During the month of May 1951, a breadboard type super heterodyne receiver was designed and constructed. Parts for the set were obtained by using discarded receivers. Valuable training was derived from this project. The maintenance airmen enjoyed this progressive project and look forward to future projects of this sort.

Two new test sets have been proposed in theory and design has begun. The sets are to be a peak to peak reading voltmeter adapter and a TR tube tester. The field engineers are assisting in these projects and take an active interest in following them through to completion. During the month, 620 hours of On-the-Job training was given.

Performance of the AN/CPS-5D radar has been excellent. On 9 May 1951, at 1032 hours, a target was picked up at 265 degrees, 240 miles distant.

Radar operations time for the month was as follows. AN/CPS-5D: 744 total hours scheduled; 711.54 hours operational; 21.57 hours authorized maintenance; 6.22 hours equipment failure; 3.47 hours off for high wind. AN/CPX-2 IFF set: 744 total hours scheduled; 721.41 hours operational; 21.12 hours authorized maintenance; 00.20 hours equipment failure; 00.47 hours off for high wind.

The radio communications section received 3 transmitter crystals for VHF radio channels. A large shipment of VHF communications equipment was also received. There were no breakdowns that kept communication off the air for any length of time during May 1951.

Rated personnel at this organization maintained flying proficiency through the use of a C-54 aircraft which was loaned from McChord AFB., WA. for a few days during the month.

The On-the-Job training program is progressing according to schedule. A total of 95 airmen were assigned to OJT. Fifty seven of these were at the 25% level, 27 were at the 50% level and 11 had reached a level of 75% proficiency.

Troop training continued at a steady rate as required by 25th Air Division and WADF Regulations.

The following personnel are attending service schools: Capt. George Phillips, AN/FPS-3 school at the Bendix Aviation Corp. factory, Towson, MD.; Capt. Robert E. Boyle, Controller school, McChord AFB, WA.; Capt. William K. Foster, Controller school, Tyndall AFB, FL.; 1st Lt. Richard Shilcott, Controller school, Tyndall AFB, FL.; Sgt. L.M. Palmer, Radar Repairman school, NTS, Great Lakes, IL.

A total of 19 interceptions were made during the month from 21 attempted intercepts. Two were unsuccessful. Also for the month there were a total of 16,979 radar plots with 2,890 tracks and a maximum radar range of 240 miles with an average radar range of 70 miles.

The squadron was stunned by the death on 30 May 1951 of two members, M/Sgt. M.F. Sherrell and Cpl. Leonard Wilkinson. The two airmen were drowned when Sgt. Sherrell's car plunged off a 30 foot embankment into a swamp. The car overturned pinning Sgt. Sherrell, Cpl. Wilkinson and two civilians underneath. Cpl. Starkovich, was thrown clear and suffered only minor bruises. The other four were killed.

The accident happened about 2045 (PDT) as Sgt. Sherrell attempted to round a sharp curve near Warrenton, OR. Sgt. Sherrell was from Dallas, TX. and Cpl. Wilkinson was from Chicago, IL. A memorial service was held on 31 May 1951

by Chaplain Meyers from the 25th Air Division. The bodies were shipped to their homes with M/Sgt. Albert Nemy escorting Sgt. Sherrell's remains and Sgt. Charles Gaston escorting the body of Cpl. Wilkinson.

A color guard from Ft. Stevens participated in the Armed Forces Day ceremony at Tongue Point Naval Station on 19 May 1951. M/Sgt. Burl Day, food service supervisor for the squadron, supervised special decorations in the dining hall in observance of Armed Forces Day. A turkey dinner with all the trimmings was the menu of the day.

Colonel Clinton D. Vincent, Commanding General of the 25th Air Division made a visit to the squadron in May. Col. Vincent arrived in time to participate in a retreat ceremony after which he was a guest of the squadron officers at a reception.

#### June 1951

There were no significant changes in the organization during the month of June.

The acquisition of another typewriter has speeded administrative work but a shortage of machines still exists.

Plans are being made to move the administrative section to the site at Naselle. It is expected that this move will take place during the next ten days to two weeks. The move will include orderly room personnel, transportation and some supply personnel.

The strength of the organization as of the last day of the month is as follows: 19 Officers; 225 Airmen; 6 Civilians. Of this strength, 3 Officers and 51 Airmen are assigned to the Naselle site.

The unit supply officer, Capt. Robert H. Jones, departed on leave on 18 June 1951 and is being replaced by Capt. Albert R. Hough, assistant supply officer.

The estimated value of the TO&E for the squadron is \$265,000.00 and the estimated value of the TA property is \$1,986.00. An acute shortage of stock lists and supply catalogues hampers the work of the supply section.

The life of the crystal rectifiers 1N21B, used in the AN/CPS-5D radar set, has increased during the past month. This month's use of 28 was approximately a 50% reduction over May 1951. To date no explanation has been found to account for this increase.

On 2 June 1951 Mr. Gray and Mr. Seal from the Airborne Instrument Laboratory visited this site for the purpose of making a survey on GPA-7A parts consumption and operational efficiency for the CADS project.

On 15 June 1951 Capt. Gordon and Capt. Bauchard were present for ECM jamming familiarization. With the aid of an ECM equipped airplane, various forms of jamming were demonstrated. Noise CW jamming was rendered ineffective by the magnetron tuning kit MX-774/CPS. As soon as the scopes

were jammed, the magnetron frequency was changed by use of the MX-774. This would take approximately one minute for the frequency to be changed and again have a clear presentation on the scope. It took the jamming aircraft approximately 15 minutes to find the new transmitting frequency.

During the month of June, 140 man hours of formal classroom training were given to radar maintenance personnel. This training was given on theory and operation of the Mark X IFF system. A total of 360 hours of on-the-job training were given on various electronics subjects.

The AN/TPS-1B radar set is being used for on-the-job training of new radar personnel in the maintenance section. The set was not tactically deployed as originally planned.

Radar operation for the month of June is as follows: AN/CPS-5D; 720:00 hours scheduled; 695:15 hours operational; 20:13 hours preventive maintenance; 4:32 hours breakdown time. AN/CPX-2; 720:00 hours scheduled; 710:41 hours operational; 8:58 hours preventive maintenance; 00:21 hours breakdown time. The best radar range observed during the month was 208 miles.

The On-the-Job training program is progressing according to schedule. A total of 104 airmen were assigned to OJT. Fifty-six of these were at the 25% level, 31 have reached the 50% proficiency level and 17 had reached a proficiency of 75%. Troop training was in accordance with 25th Air Division and WADF Regulations.

The following personnel are attending service schools: Capt. William K. Foster, Controller School, Tyndall AFB, FL.; T/Sgt. Ernest Smith, AN/FPS-3 school at the Bendix Aviation Corp., Towson, MD.

Housing facilities at Ft. Stevens are adequate and comfortable. Base facilities are maintained by the U.S. Engineers.

Radar operations crews are still being rotated between Ft. Stevens and Naselle each month in order to maintain maximum proficiency of all personnel.

This station participated in Operation Strike, 22 June through 24 June 1951 but from an EW (Early Warning) standpoint the operation was unsuccessful due to the fact that Strike A/C were too far from this station and fighters were not available.

During the operation there were three opportunities for intercepts all of which were unsuccessful. There was one authentication for fighter aircraft. Lt. George Hill and Capt. Robert Cox were the controllers on the Strike, 26 June to 29 June 1951. "Dishpan" was commended for its long range early warning pick-ups.

The record of operations for the month was as follows: 23,702 total plots; 2,972 total tracks; 7.9 average plot per track; maximum radar range was 235 miles with an average radar range of 75 miles. There were 24 attempted intercepts all of which were successful. There were no unidentified tracks.

July 1951

This month the movement of the Headquarters to Naselle, WA., was accomplished. The effective date of the move was 11 July 1951. On the same date Detachment #1 at Ft. Stevens was established. Capt. Aaron E. Caplan was appointed as Detachment Commander.

The problem of adequate space for operation of the Orderly Room is critical. Considering the amount of administration necessary to accomplish the mission of this squadron, it is definitely felt that a larger Orderly Room is necessary for maximum efficiency of operation. This section lost two key personnel this month. Cpl. Trowbridge Stanley, the Cost Control Clerk, was seriously injured in an automobile accident, and S/Sgt. Gerald Spear, the Security Clerk was transferred to ADC Headquarters.

Capt. Lloyd W. Casselman was appointed as Squadron Adjutant vice Capt. Aaron E. Caplan, and a shift of additional duties was made among the other Officers to compensate for the assignments at the P and L radar sites.

The strength of the Squadron at the end of the month was 19 Officers and 225 airmen assigned.

The installation of the Communications Equipment is well on its way to completion at the P site. Telephone equipment has been installed in the cantonment area and is in use at the present time. Installation in the Operations Area will be accomplished within this week. The TDZ and RDZ communications equipment is installed at the P site, however it has not been installed at the L site.

The RCA Field Engineers have been receiving OJT on the new equipment at the P site. The Supervisory Non Coms also have been receiving training. Two Radio Operators have been transferred to overseas stations this month.

The Operations Section for this Squadron still remains at the L site. An ECM training mission under the direction of the 25th ADIV was accomplished at the L site. This mission was very successful and valuable training was accomplished. Also a test on R/T procedures was given to all Controllers this month. Maj. Cooper and Capt. Rodal of the Division Headquarters gave a critique on the Strike Mission of 22-24 June 1951 to all Operations Personnel.

Total plots this month were 14,678 from 2865 tracks with 5.1 average plots per track. The maximum radar range was 215 miles with an average radar range of 75 miles. There were 26 attempted interceptions of which 24 were successful. There was one unidentified radar track.

On the job training is being accomplished at both sites. The program at the P site is now confined to only the Supervisory personnel and the Technical Reps., so as not to interfere with the installation and testing of new equipment. The troop training program is progressing in the normal manner. Emphasis was placed on Personal Affairs in the troop training this month. The ECM training accomplished a great deal and it is felt that this training should continue.

All assigned vehicles are now in operation. Seventeen drivers tests were administered and permits issued. Additions to the Motor pool were one 1/2 Ton Pick-Up and an Ambulance. Progress is being made toward the building of the motor pool buildings at the P site.

The AN/TPS-1B radar set, serial number 412 was shipped to Neah Bay, WA., on 18 July 1951. Authority for shipment to the 758th AC&W Squadron was 505th AC&W Group Letter, subject, Re deployment of AN/TPS-1B Radar Serial No. 412. The AN/CPX-2 IFF radar is in the process of being dismantled and is being prepared for shipment.

The standby level of two 1B23 type tubes has been canceled. Subject tubes can only be secured by anticipated ROCP's or ROCP requisitions. This will hamper the operational efficiency of this site in the future. The life of the 1N21B type crystal has increased during the last month. No explanation can be given for this increase. Average life of the crystal is now 35 hours.

Operational efficiency for the AN/CPS-5D radar for this past month has been excellent. The breakdown of radar operations is as follows: 744:00 total hours available; 695:12 hours operational; 39:23 hours for PM; 9:25 hours of unscheduled PM.

All Radar Maintenance personnel that could be spared have been transferred to Naselle, WA. Maintenance airmen at the Naselle radar site are receiving instructions in the operation and maintenance of the AN/FPS-3 radar. Bendix representatives are the instructors.

A preliminary calibration test was accomplished on the AN/FPS-3 radar equipment during the period 16 and 17 July 1951. Observers on this test were Air Commodore Watson, Wing Commander Trollope and Squadron Leader Mitchell from the RAF. Final peaking and calibration on the equipment can not be accomplished until test equipment for the set is received. Spares and plotting board equipment have not arrived.

Col. Monay and Lt. Col. Volz, OOAMA, visited and inspected the progressing installation of equipment. Also Mr. Spicer and representatives from the Bendix Corp. visited and inspected the work being accomplished on the AN/FPS-3 radar.

A domestic Alert was held at the Ft. Stevens site on the 27th of the month. Upon sounding the Alert, a time check was made and it was noted that all airmen were at their assigned defense posts within fifteen minutes. No discrepancies were noted. Also, a weekly fire drill is conducted at the Ft. Stevens site in conjunction and by joint agreement with the Hammond Fire Company. Satisfactory drills were also conducted at the Naselle radar site.

#### August 1951

The administrative section of the squadron continues to complete the vast amount of work necessary in daily correspondence and monthly reporting schedules, under great difficulties. The first problem is lack of space and segregation for the orderly room. The personnel are easily distracted from



their work by such cramped quarters. The second problem is the large amount of time consumed in transmitting correspondence to Detachment No. 1 at Ft. Stevens and return to Headquarters at Naselle, WA. Suspense hours and dates are met only after a great amount of energy, man hours and transportation facilities have been expended.

A shift of additional duties among the officers has been made to balance the assignments at both the P and L sites. In addition the Air Inspectors from Western Air Defense Force inspected both sites on 22 and 23 August 1951.

The strength of the squadron as of the 31st of August 1951 was 19 Officers and 209 Airmen assigned.

The installation of the communications equipment at the P site is nearing completion. Parts are still required for completing the installation of the TDZ and RDZ equipment. Three members of the section completed a familiarization course on the UHF radio equipment at McChord AFB, WA. Additional members will be sent to the school in the future. Also, training on safety when working on the high voltage and transmitter tuning is being accomplished at Detachment No. 1, Ft. Stevens.

The Operations Section for the squadron still remains at Detachment No. 1. Lt. Gerald P. Ablor, Controller, arrived for duty. He was given an examination for controllers in accordance with 25th Air Division Regulation 55-3.

Practice intercepts were made with aircraft from the Naval Reserve, stationed at Clatsop County Airport for one week.

There were 16,468 total plots this month from 3,347 tracks. The maximum radar range was 221 miles with an average range of 74 miles.

On the job training is being accomplished at both sites. The technical representatives at the P site are holding classes on new equipment being installed. Capt. Harold W. Owens has been appointed Training Officer and a revitalized training program for each site is expected.

Total vehicle mileage for the month was 8093 miles. Consumption of gasoline for the same period was 808 gallons.

A great difficulty exists with the necessary daily courier trips between the two sites. Continual breakdowns occur and maintenance facilities at the P site are very limited.

The motor pool building is nearing completion at the P site and maintenance problems will be slightly decreased when the building is available. Vehicle maintenance equipment is lacking at both sites.

Radar maintenance personnel that have received OJT training on the AN/FPS-3 radar at Naselle, WA., are being rotated and are being replaced by airmen that have not received training.

On the evening of 27 August 1951, radar set AN/CPS-5D had malfunctions. During the period taken to repair the set, symptoms of the trouble kept

changing. Erratic changes in the symptoms made it very difficult to trouble shoot. It was found that the high voltage plate lead to the hydrogen thyratron (V-902 in the modulator) was arcing to ground. This difficulty was corrected by moving the plate lead away from the point where it was arcing to ground. Number two difficulty was found in the K-2801 under current relay. This was corrected by replacing the defective relay with a new one. Number three trouble was the bursting of the oil filled filament transformer (T-901) in the modulator. Oil from the transformer splattered the interior of the modulator unit. This took two hours to clean. T-901 was replaced with a filament transformer. It is believed the reason for the failure of the filament transformer, was the arcing of the high voltage plate lead of the hydrogen thyratron to ground. Since the above action has been taken, no further difficulty has been encountered.

The AN/TPS-1B radar set, serial number 412, was received from the 758 AC&W Squadron, Neah Bay, WA. A letter has gone forward to higher headquarters requesting orders on the future disposition of the radar set.

Radar set AN/CPX-2, serial number 50, has been readied for shipment. A letter has gone forward to higher headquarters, requesting authorization to turn in the radar set less the missing items.

During the reporting period one TR tube (1B23) had a life of 500 hours. This is exceptional in comparison with past performance of the tube. The reason for this increased life seems to be the systematic rotation of the TR tube in the cavity. Since this practice was initiated some months ago, a definite increase in TR tube life has been noted.

Two airdrops were made at this site during August, in supply support of anticipated ROCP and ROCP requisitions. Both drops were excellent and no damage was incurred to the tubes involved. This method of supply for urgently needed items will certainly improve the operational effectiveness of the Aircraft Control and Warning network.

The operational breakdown for the AN/CPS-5D radar for this reporting period was: 744:00 hours scheduled; 686:31 hours operational; 30:14 hours of scheduled maintenance and 27:15 hours off the air due to equipment failure.

Airmen are being processed through the Clothing Sales Store at McChord AFB, WA. To date 94 airmen have been processed. Capt. Albert R. Hough, assistant Supply Officer, received PCS orders. Also a shortage still exists of stock lists and Technical Orders. A few are now being received from the 822nd Depot.

A total of 3733 rations were fed during the month of August. New equipment, consisting of a potato peeler, electric toaster and silverware were received at Detachment No. 1. A great improvement in the mess at the P site has been accomplished during the last month. The installation of electric stoves to replace the present coal type will be welcomed by the mess personnel.

September 1951

During the month two airmen from the administration section were put to the task of completely overhauling the Squadron's publications of higher headquarters and conducting an inventory of all blank forms. All regulations, letters, etc., were checked to make certain that they were properly posted. At the close of this, the indexes of all publications were examined for the purpose of making up a list of publications not in hand but necessary for the squadron's operations. These will be requisitioned. A copy of the inventory of all blank forms has been sent to all sections for their examination, with the request that further needs be indicated.

The most serious administrative problems continue to be: A heavy work load, which combines with newly trained orderly room personnel to make for a difficult situation; A great number of continuing reports, over 50, in number, plus many miscellaneous one-time reports, which require many badly needed man hours for completion within the suspense date required. Overriding these problems is the steady loss of trained personnel in all sections, with no replacements being received.

The strength of the squadron at the end of September 1951 was 19 officers and 187 airmen assigned.

All the airmen of the communications section are receiving OJT, they have built a short-wave transmitter and repaired commercial receivers as projects. Also Mr. Serawski, the RCA Technical Representative, was transferred from this organization to ADC.

Capt. Kenneth E. Sundberg took over as Chief Controller on 15 September 1951. This station received a great deal of friendly jamming during the month of September, most of this jamming was considered not effective to operations. One of the aircraft producing the friendly jamming on 20 September 1951, made an emergency landing at Clatsop County Airport, with one engine burning.

For the month of September 1951, operations had a total of 16,601 plots from 2,757 tracks. The maximum radar range was 187 miles. There were 8 attempted interceptions of which 7 were successful.

The Troop Training program is being carried out in conformance with the scheduled Troop Training program and existing regulations. Greater emphasis is being placed on Ground Safety and Security.

Capt. Blankenship, Group DM inspected the transportation section on 14 September 1951. Vehicle mileage for the month was 13,859 miles, with a gasoline consumption of 1,433 gallons. Also, the following vehicles from this station are at McChord AFB, WA., for major repairs: 3/4 ton 4 x 4, Reg. No. 285427; 2 1/2 ton 6 x 6, Reg. No. 4871304.

There have been no military vehicle accidents since April 1951.

Two automotive mechanics were lost to the Transportation Section due to transfers. No replacements have been assigned. Word has been received that additional vehicles will be assigned but the shortage of available vehicles and maintenance present many transportation problems.

There were no changes in radar maintenance during this reporting period. The radar maintenance personnel are still being rotated to P-57, for training on the new equipment. The installation Field Engineers are the OJT instructors and are being assisted by the Squadron Field Engineers.

On the evening of 8 September 1951, radar set AN/CPS-5D, had a malfunction. Symptoms indicated trouble in the PU-40. Checks made during the trouble shooting indicated every thing normal. The PU-40 would run, but had zero output voltage. After one hour of checking with negative results, the armature of the PU-40 generator was taken out for examination. Inspection revealed it to be satisfactory. After replacing the armature the PU-40 was restarted. This time it had normal output voltage. The PU-40 operated normally for a short period (20 minutes), then suddenly the output voltage went to zero. Again all the trouble shooting checks were made, still negative results. After considerable delay in checking and rechecking, the brushes of the amplidyne exciter on the PU-40 were rechecked. Close examination revealed that one brush was bad. After repairing and replacing the brush the PU-40 operated normally. The radar set was off the air for a total of 13:10 hours.

On the morning of 22 September 1951, the radar set AN/CPS-5D, had a major breakdown. Malfunction of the set was chipped brushes in the amplidyne exciter of the PU-40. Brushes that were installed in the PU-40 were locally prefabricated by the maintenance men in lieu of regular brushes, that were not available. The substitute brushes were softer than the regular brushes. The armature of the amplidyne exciter was taken out for inspection. Inspection revealed the commutator was badly pitted and grooved from the chipped brushes. ROCP requisitions were sent out immediately for the brushes, and an armature for the amplidyne exciter. Several follow ups were made to no avail. Mr. Miller, Radar Field Engineer, turned the commutator down on a lathe. This was done (45) hours after the set broke down. The armature was replaced and substitute brushes were again made. After turning on the set it operated normally and gave no further trouble. After the set was on the air, a TWX was received from AF 69 SO, McChord AFB, WA., to have the armature locally repaired. Total time off the air was 51:33 hours.

Radar set AN/TPS-1B, serial No. 412, was ordered re deployed to the Sacramento Air Material Depot. Authority for shipment was contained in WADF message WDMOS-4 14381 dated 25 September 1951. The Radar Shipping Control Officer is making the necessary arrangements to ship the set.

The authorization for shipping Radar Set AN/CPX-2, Serial No. 50, has not been received. The set is ready for shipment except for authorization.

A request for overhaul of the AN/CPS-5D radar has gone forward to higher headquarters. Time since last overhaul when the request was made is 3,910 hours. Request was contained in message ACW-59-378, dated 28 September 1951.

Morale of the radar maintenance men is steadily dropping, because of the lack of promotions in this section. Airmen are justified in this, and are long overdue for promotion.

Operation of the AN/CPS-5D radar for this reporting period is as follows: 720:00 hours scheduled; 607:35 hours operational; 36:34 hours of authorized maintenance; 73:07 hours off the air due to equipment failure and 1:44 hours off due to high winds.

Capt. Blankenship, Group DM, inspected Squadron Supply on 14 September 1951. He was very well satisfied with the section, and is going to try and send supply personnel from other squadron to this base for instruction. Pfc. Tomer, Supply Sergeant, 761st AC&W Squadron, received 2 days Supply instruction from this squadron on 24 and 25 September 1951.

During the month of September we processed two UPREL's for this squadron. Also, as per instructions from higher headquarters, the total dollar value of this squadron's UPREL for droppage was computed and was found to be \$3,416.00, with a corresponding droppage of \$34.16, per year. This was submitted to BAO on 19 September 1951. Total T/A droppage per year as received from BAO is \$172.49.

New consolidated hand receipts to all sections were completed for the month of September. A new T/A was typed on Form 115, and all equipment listed in appropriate spaces. Stock lists are gradually being received and are an estimated 75% complete, at the present time.

Capt. Blankenship, Group DM, inspected the books and mess hall on 14 September 1951. On 16 September 1951, a Headquarters WADF team inspected the mess hall for sanitation, preparation of food, equipment and records. The inspection party consisted of M/Sgt. George W. Pratt, T/Sgt. Abraham Dickter and T/Sgt. Alex S. Lecatovich. T/Sgt. Bill Hines, McChord AFB, WA., Food Service Supervisor's Office, inspected the mess hall on 16 September 1951, for sanitation, equipment and OJT training. Maj. W. W. Moore, 505th AC&W Group Air Inspector, checked the mess hall for storage, sanitation, preparation of food and garbage disposal on 21 September 1951.

S/Sgt. Roy W Partington and S/Sgt. Richard Gutierrez, were killed in an automobile accident on highway 101, approximately 5 miles from the station. Cpl. Young S. Davis was critically injured in the accident and has been taken to Letterman General Hospital, San Francisco, CA.

#### October 1951

The most serious problems encountered during the month were largely outgrowths of the squadron's present situation, operating two widely separated sites with the personnel normally provided for one. This has required the shifting of men from their primary duties to new administrative tasks. Aggravating the situation has been the steady loss of administrative personnel through frequent requisitions for overseas shipments.

The first and most noticeable outgrowth of this practice, forced upon the squadron by factors beyond its control, has been the fact that many administrative tasks in personnel, supply and so forth, have been improperly done. Inexperience at new tasks has brought criticism from higher headquarters. This problem can only be solved by trial and error, in many

instances. In an attempt to prevent it from again arising, a continuing program of cross-training among orderly room personnel has been instituted, so that replacements will be available in the event of future loss of personnel.

The other chief outgrowth has been the development of a morale problem. Airmen assigned, for example, to duties as Air Police, after having received other training, are dissatisfied. Strenuous efforts are being made to circumvent the serious problem, but in some cases there is not much that can be done.

The morale within the squadron is in a healthy state. In spite of several factors which render duty in the unit not as attractive as that in a unit more advantageously situated with regard to housing and recreation, the airmen accept the situation in a mature manner, although there are exceptions.

The chief problem in this regard is that of isolation. This factor makes it difficult for personnel to find family housing within a reasonable radius from the base, and also makes it difficult for them to find recreation. This area is sparsely populated and its meager recreational facilities are slanted toward the social practices of lumberjacks and fishermen, more than towards those of young airmen. In addition, the area is poorly serviced by public transportation facilities, bus connections being limited to once a day. By and large, then, the airmen must either have their own transportation or they must rely upon such informal and illegal methods of transportation as hitch-hiking. Even this method is unsatisfactory, for traffic into the area at late night hours is limited to an occasional automobile, often resulting in airmen being stranded all night in towns as much as sixty miles away.

These conditions pose serious problems for the squadron, and the fact that they have not resulted in more requests for transfer and discharge than have heretofore been submitted is remarkable. By and large, it can only be expected that these problems will continue. It is extremely doubtful that housing in the area will be appreciably augmented, there is no prospect of an increase in frequency of public transportation, and it would be futile to expect a marked improvement in the quality and quantity of recreational facilities within the squadron's environs.

It is therefore of the utmost importance that the squadron be able to liquidate its site at Ft. Stevens, OR. This will make it possible to place airmen within their chosen specialties again, thus eliminating a major source of discontent. Further, it will give to the airmen of this unit a sense of mission which has heretofore been difficult to maintain. This sense will tend to provide justification for there being so remotely situated.

In the early part of the month the squadron was visited by the 560th Air Force Band. A dance was arranged, and the airmen participated enthusiastically. The subsequent reaction suggests very strongly that here would be a remarkably effective means for relieving the tedium of duty in such an isolated spot. This type of entertainment afforded by a periodic dance is just the type of entertainment to which the young men of the squadron, who constitute the bulk of our personnel, were most accustomed, before entry into service. Regular visits by this band would provide them with something to anticipated

and will tend to keep them within the area, preventing long weekend trips which are a source of concern.

During the month the squadron's operational unit remained located at Ft. Stevens, OR. Its experiences were largely routine. The only remarkable feature was the utilization of diesel power as the sole source of power for the unit, thus relieving the commercial source.

The same development took place at the Naselle site, which went on diesel power on the same date, 30 October 1951. Little difficulty has been experienced in this regard, although intermittent power failures have resulted. A system of local contract maintenance with the Cummins diesel concern has adequately met the needs of the unit.

The most important development during October was the steady progression of the Naselle operational site toward completion. As the month ended, an acceptance team from 25th Air Division and from OOAMA, Hill AFB, UT., arrived. The formal acceptance run was slated to begin on 1 November 1951. In preparation for it, enough men to operate the site were brought over from Ft. Stevens.

Operations at Ft. Stevens reported that during the month they had a total of 11,966 plots with 2,176 tracks and a maximum radar range of 200 miles. There was one attempted intercept which was successful.

The radar at Ft. Stevens was scheduled for 744:00 hours of operation and had 660:30 hours of operational time with 33:05 hours of authorized maintenance time off. There was 48:48 hours off due to equipment failure and 1:37 hours off due to high winds.

During the month the supply section moved from Ft. Stevens to Naselle. The move was preceded by the shipment to Base Supply, McChord AFB, of superfluous material. Despite this, the problem immediately met with on the new site was that of storage space. Although this situation has partially been eliminated by radical measures, the problem will continue to be acute until an adequate supply building has been constructed.

The movement of the supply section to Naselle, leaves at Ft. Stevens only the transportation section, operations and such housekeeping personnel that are necessary to administer them. It is expected that in the near future all sections will be withdrawn from Ft. Stevens, allowing its administrative personnel to be absorbed into this unit. As of the end of October 1951, there were 6 Officers and 94 Airmen at Ft. Stevens while 9 Officers and 68 Airmen were at Naselle.

#### November 1951

During the month of November, 1951, the most important development within the squadron was the rapid movement of the Naselle site toward operational status. For months past this effort has been limited to the construction of the physical plant, a process delayed by many difficulties, and productive of serious problems of morale and comfort. During this month, however, the

radar equipment was accepted from the Air Materiel Command, and all buildings in the cantonment area were accepted from the Corps of Engineers.

All that then remained before the site could enter the net was for it to be peaked and calibrated. Our personnel immediately entered upon the first of the tasks, and the major portion of the month has been devoted to this effort. Sufficient personnel to operate the equipment on a 24-hour basis were brought over from the Ft. Stevens site, and a thorough program of OJT on the new equipment was immediately instituted. This situation produced the squadron's serious personnel problem, for it was forced not only to maintain and administer two sites with the personnel normally provided for one, but it assumed the additional burden of operating both sites. The Ft. Stevens detachment was reduced to skeleton crews, and all personnel were forced to work unusually long hours. By the end of the month the drain of personnel to the new site had progressed to the point where, for the first time, a majority of the squadron's personnel were situated at Naselle. On 30 November 1951, there were 8 Officers and 103 Airmen at the Naselle site, and only 4 Officers and 65 Airmen at the Ft. Stevens location. When it is considered that Ft. Stevens continues to provide a 24-hour surveillance of the squadron's assigned sector in spite of the fact that it was operating with what amounted to a corporal's guard, it will be seen that the personnel responsible have performed in an outstanding manner.

Within a relatively short time the personnel at the Naselle operations were ready for calibration, and the arrival of the calibration group has been impatiently awaited throughout the month. From the viewpoint of personnel allocation alone, it is imperative that the Ft. Stevens site be eliminated as rapidly as possible.

The operational breakdown for the month of November, 1951 at the Ft. Stevens radar location was 720:00 hours scheduled with 563:23 hours operational and 32:42 hours of authorized maintenance. There were 103:31 hours off the air due to equipment failure and 24:54 hours off due to high winds. They had 1,565 tracks with 8,171 plots and a maximum radar range of 200 miles and an average range of 70 miles. There were no interceptions attempted.

Both operational sites operated for a large part of the month on auxiliary diesel power, partly because of the numerous commercial power failures, and partly because of the attempt to save commercial power due to the drought. The Buda diesel equipment at Ft. Stevens functioned perfectly with respect to voltage and frequency. The Cummins diesel equipment at Naselle, however did not perform so satisfactorily. Both frequency and voltage varied to an unsatisfactory degree. Frequency oscillation results in particularly unfavorable results in the radar set MTI circuit, and for this reason the operational personnel were relieved when it was possible to return to commercial power.

It is felt, however, that power variation at this site is not necessarily a product of the equipment's deficiency, but results from the fact that auxiliary power was used to provide power for the entire Naselle site. In contrast, the Ft. Stevens auxiliary power was utilized to provide power only for the radar unit. The Naselle equipment, then, was subject to a constantly varying load, as



automatic equipment, heaters, radios, lights, etc., clicked on and off in the cantonment area.

The major problem encountered in the operation of the Naselle operational site is the lack of an Arctic tower. Radar operations is situated upon a mountain top approximately 2,000 feet above sea level, and weather conditions are extremely poor. Winds of over 80 miles per hour combine with drenching rains, sleet, and driven snow to make it impossible to work on the tower equipment on many occasions. It would be extremely hazardous for personnel, and the exposing of red-hot equipment to the elements would probably destroy it. In addition, high winds and the lack of an Arctic tower have already forced the tower to shut down several times. Under such conditions the radar transmitter becomes heavily loaded with ice, and its great area presents too much resistance to the wind for its capabilities to overcome. Even the Ft. Stevens site, which is located just a few feet above sea level, was forced to shut down for over 24 hours during the month because of high winds. This condition will remain a serious, insurmountable problem until such time that an Arctic tower is constructed for the radar equipment.

As during the previous months, the most serious problem encountered, other than the over-riding one of division of the squadron into two widely-operated sites, is that of an inadequate number of trained administrative personnel in the squadron TO&E.

The first condition has been so successfully approached, however, that a marked improvement may be noted. The frequency of overseas shipments has declined, and a thorough-going program of cross-training has given the squadron a workable back-log of administrative knowledge. A certain degree of stability has been achieved, so that personnel are becoming increasingly familiar with their tasks, and performing them more effectively. The tension of uncertainty, and the aggravation of having to correct work returned by higher headquarters, have been alleviated considerably. In addition, a more efficient arrangement of the orderly room, allowing more space and light, and grouping functions more homogeneously, has aided matters.

The second condition, that of an inadequate TO&E authorization for administration, remains as before. The administrative workload of a squadron of this size is a heavy one, and a sizable group in the orderly room is needed to carry it. To perform the squadron mission adequately, unauthorized additions to the orderly room have been forced upon the squadron. This has meant that men have been working out of their AFSC, although voluntarily, and a ready solution for the problem is not at hand.

As the Naselle site has grown in size, it has become possible to shift men into tasks more in accordance with their desires and capabilities. Highly trained men serving in the Air Police section, for example, have been released to work in their original section as personnel have been withdrawn from the Ft. Stevens location. Continued emphasis will be placed on this effort.

The morale problem continues to be a serious one by reason of the squadron's isolation from urban areas, but is not so serious as in the past. As the airmen accustom themselves to the area, they find more possibilities for entertainment, or make their adjustment to the lack of it. Furthermore, the

communities surrounding the squadron are taking steps to provide diversion for the airmen. The City of Raymond has extended its welcome, and is considering instituting a bus service on weekends. A more complete liaison has been made with the City of Longview, a much larger town, although situated some 60 miles from the squadron. Furthermore, the Naselle community has helped a great deal by opening their homes on Thanksgiving, providing the use of the local high school gymnasium, and making it clear through their local organizations that the airmen are welcome in the area.

This situation has been greatly aided by the efforts of higher headquarters. A USO show visited the squadron, and performed in the local grange hall, to the enjoyment of the squadron members and community alike. A representative from Air Force headquarters also visited outlying communities for the purpose of demonstrating the way in which they can take in our airmen to the mutual benefit of all. Mr. Burke is an effective speaker, the movie he used is persuasive, and positive results have come from this visit. In time, particularly when this unit receives its 26 passenger bus, this problem will be reduced considerably.

This is the end of the Monthly Historical Reports filed by the Squadron Commander for Ft. Stevens, OR.

### PART III - HISTORICAL RECOLLECTIONS

The following information has been furnished by Robert L. Shufelt who was stationed at both Ft. Stevens, OR., and Naselle, WA., with the 759th AC&W Squadron.

"The Korean War started in June, 1950. In July of 1950, the 120th AC&W Squadron of the Arkansas Air National Guard was activated and sent to Fort Stevens to set up communications. I haven't found out who set up the radar. In September 1950, a detachment of the 636th AC&W Squadron was sent to Fort Stevens from McChord AFB, Tacoma, Washington, to man the station and protect the Columbia River. After the unit was in full operation, it was assigned as the 759th AC&W Squadron. The 759th was attached to the 505th Fighter Interceptor Wing from McChord AFB. The radar units were operated from inside Battery Mishler with only antennas above ground. This unit was operated until January, 1952, at which time we were sent to Naselle, Washington where a new, more modern unit was installed on top of a mountain. The 759th AC&W Squadron protected the Columbia River until after the Viet Nam War was over.

At Fort Stevens we were quartered in the old Non-commissioned Officers quarters. Most of the old barracks had been moved or torn down. At that time the loading docks were still intact, as we had an Airman run a weapons carrier overboard on a rainy night when he was on patrol". --- End of comments from Robert L. Shufelt ---

The following comments have been furnished by John Piper who was stationed at Ft. Stevens. John was also with the 120th AC&W Squadron from the Arkansas Air National Guard.

"After our unit was activated we were first assigned to an Air Base near Spokane, WA. However, after a short time there we were sent to join the AC&W Squadron at Ft. Stevens, OR.

I was a radar operator and worked in the tunnel area inside of Battery Mishler. Our quarters were in the old Officers family quarters buildings which have long since been torn down.

Since most of us were under the age of 21, on our off-duty time we spent a good deal of our effort trying to buy beer from the local taverns but with little luck. We found that the drinking laws were much more strict in Oregon than what we were used to in Arkansas. We also spent time at the DoNut Hole in Warrenton and with many trips to Seaside.

Never saw so much rain in my life and complained about it, to no avail".---End of comments from John Piper.

The following comments are from LTC. Earl F. White, USAF Retired, who started out in the Arkansas Air National Guard in 1950 and then spent some time at the Fort Stevens, Oregon USAF radar complex. Here is what he had to say: "The 120th AC&W Squadron was assigned to the ARKANG in June of 1950 under the command of Capt. Douglas C. Shelton, an air technician, who was tasked to build the unit which was to be activated in 1951.

The 120th was commissioned to be a mobile radar unit. Hence the full field equipment both in clothing and technical equipment was issued and in place for our supposed eventual mission with the AN/TPS-1B radar set as our main equipment item.

Based on need to accomplish the unit mission, Capt. Shelton recruited technical people from the Bell Telephone Company and mechanical people from a local automobile agency. All of this group were veterans of WW-II so the unit became operational in a short period of time. Remainder of the personnel was made up from WW-II veterans, ROTC graduates and high school graduates that were to young for WW-II. By the end of 1950 the squadron was operational with most positions filled, including the medical section.

LTC. Richard Moore had been placed as the commanding officer with Capt. Douglas C. Shelton as operations officer when the unit comprised of 15 Officers and 101 Airmen was activated on 1 October 1951. The squadron was to be at Geiger Field, Spokane, Washington by the 20th of October for a 6 month training program.

October, November and December 1951 was used to reopen Geiger Field which had been closed since sometime after WW-II. The 120th AC&W Sq. was joined by the 134th AC&W Sq. from Texas and the 136th AC&W Sq. from Louisiana. During

this time period as we continued to train militarily we were required to turn in all of our field equipment and the AN/TPS-1B radar set. Early in January 1952 the unit received orders to report to Ft. Stevens, Oregon on or before 20 January.

A AN/CPS-5D radar set was in place in the tunnel (Battery Mishler) when we arrived. Our task was to be a gap filler in the West Coast (radar) network. The radar set and parts were scattered along the walls of the tunnel, with the official status as "Operationally Complete".

Most of the time we received supplies by motor courier. However when the radar set was ROCP required parts were air dropped with the flag pole as a drop reference point.

As squadron supply officer I relied heavily on the salvage yard at Tongue Point Naval Station for desks, chairs and anything else that was available and needed for our operation.

Overseas orders began coming in early February 1952. We lost LTC. Moore as our commander with his replacement being a regular AF Capt. William E. Field. Before this rash of orders was over the 120th had lost 8 officers and it's First Sgt. My orders caused me to leave the Fort by 25 March 1952, so my tenure at the base was 65 days.

As I recall the supply section was housed in the warehouse directly across from the parade field on the main road into the base. Capt. William Field was the commander and M/Sgt. Edwin Brown was the 1st Sgt. when I left. Capt. Maury J. Baum was the Supply and Evacuation Officer and S/Sgt. Gilbert Williams was the Supply Sgt. The mess hall was directly behind supply and connected by a concrete dock. Squadron Headquarters was in the "Guard House". While stationed at Ft. Stevens my wife and I lived at Kelts Courts in Seaside. We left 36" of snow on the ground in Spokane, Washington that started falling in November so the warmer coastal weather was appreciated. Ft. Stevens was so unusual and full of history that it was an honor to have served there and be a part of its history. It's sad to hear that so much of the housing is in disrepair. My wife and I visited the area in the mid 70's and at that time the supply and mess hall had been torn down, the foundations were still there. The "Guard House" was boarded up with signage indicating that it was to be restored. The unit was self sufficient and it was a good feeling that we were on our own and operating efficiently and felt that the unit had a mission".---End of comments from LTC. Earl F. White, USAF Ret.

The following comments are from Frank M. Eastland who was an RCA Communications Technical Representative with the 759th Aircraft Control and Warning Squadron both at Fort Stevens, OR. and Naselle, WA. "The mission of the civilian RCA "Tec. Rep" was to assist and train USAF personnel in the maintenance and operation of new and existing communications equipment. Other RCA coworkers were Felix Sierawski and Jim Meyers. The Philco "Tec. Reps" who did our identical function for the USAF on the radar equipment were Glen Miller, Don Rowell and Russ Fillinger. Glen later went to work for the Boeing Aircraft Corporation and Russ worked for the Tektronix Company in Portland, OR.

I arrived at the Fort Stevens radar site in October 1950. I was transferred to McChord AFB, Tacoma, WA., near the end of December and then returned to Fort Stevens in early 1951.

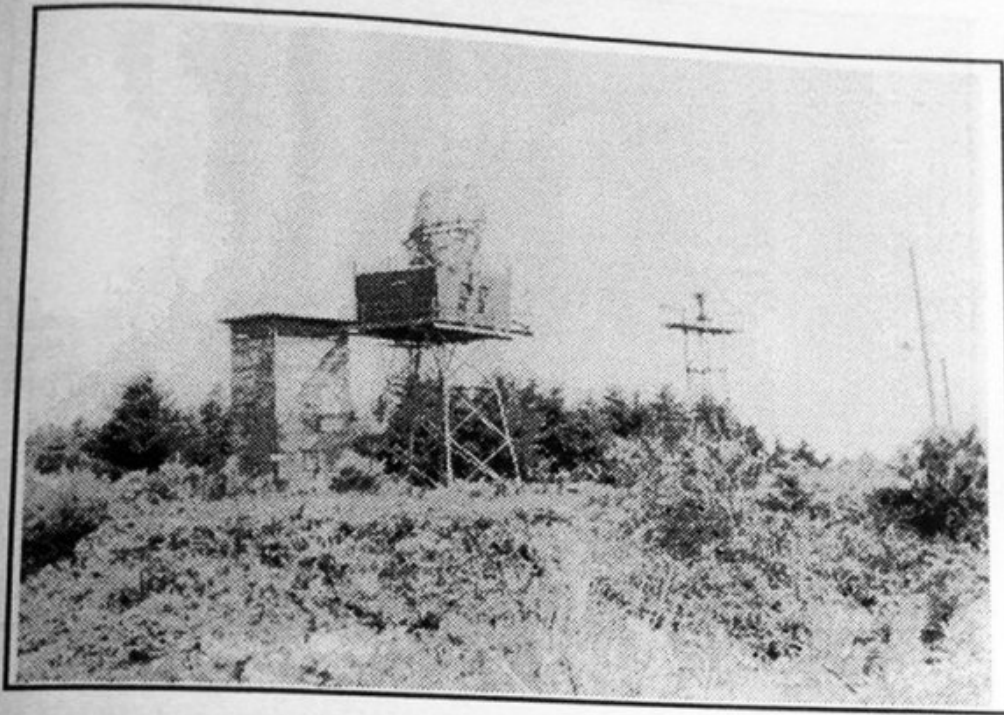
It rained almost daily from about November-May near the mouth of the Columbia with a surprise snow of about 1 foot along the Columbia in about February-March of 1951 (the historical notes of May 1951 had a request to bring the snow removal equipment up to date). There was very little to do at Fort Stevens in '50-'51. Most of the Technical Representatives lived in one of the Fort's houses, that was used as a BOQ. The BOQ may have been crowded considering that Felix Sierawski and I rented a house in Warrenton that I barely remember.

The town of Hammond was outside the main entrance to the Fort with about 200 people and 2 bars. Felix and I were players on one of bar's table shuffleboard team during late 1950. Other recreation was limited to radio listening, local sightseeing, trips into Astoria and visits to the beach at Seaside. Life at Fort Stevens was somewhat depressing during the rainy season but the following 6 months of sunshine made it worthwhile. The stay was enjoyable with or without a car. It was much worse where I was located overseas having been called to active duty with the US Army Signal Corps in March 1953.

T/Sgt. Perry was a major contributor to the operating and repairing of the communications equipment both at Fort Stevens and Naselle. The enlisted men did have baseball games in Warrenton following the light monsoon season.

As I recall the commanding officer was Capt. King and then later Capt. Caplan. The 1st Sgt. was M/Sgt. M.F. Sherrell. Capt. Caplan was also the communications officer before he became the commander.

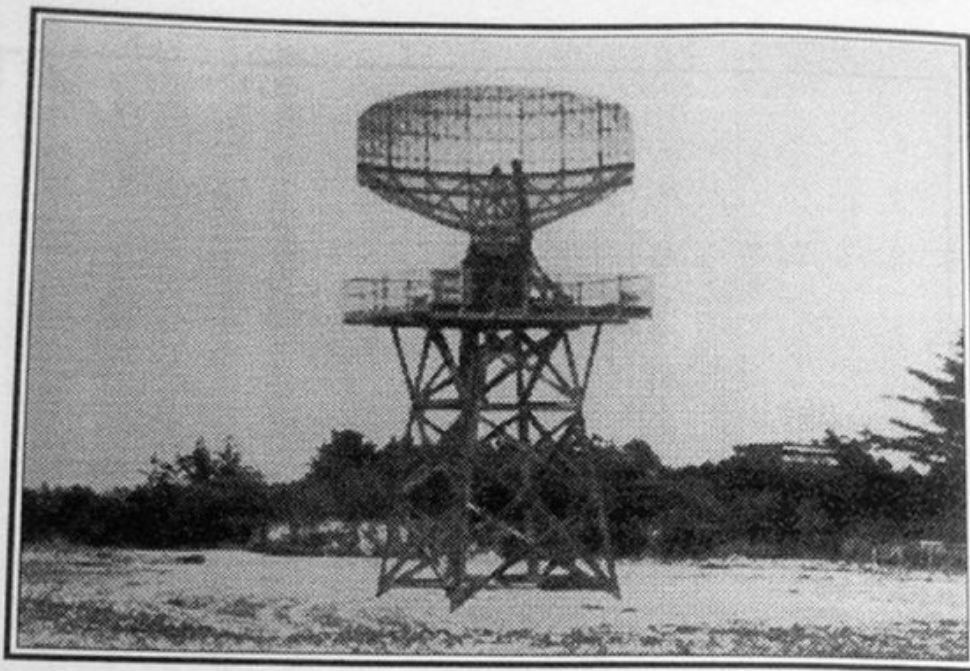
I went to Fort Stevens 2 years ago and I could not remember which house I had lived in, where the communications equipment was installed, etc.---things had changed and the town of Hammond didn't look like it did 42 years earlier. The communications equipment was installed close to the operations area in one of Battery Mishler's rooms or one of the nearby buildings. I am enclosing a copy of the map I received during my visit to Fort Stevens. [Ed. note-map referred to is the "Fort Stevens Military Reservation" map included in this document]. I did not know if the buildings shown on the map as sites were destroyed before or after 1950. The BOQ was one of the group of officer's homes that is not on the map and may no longer be a part of Fort Stevens State Park--the homes are now occupied".---End of comments from Frank M. Eastland.



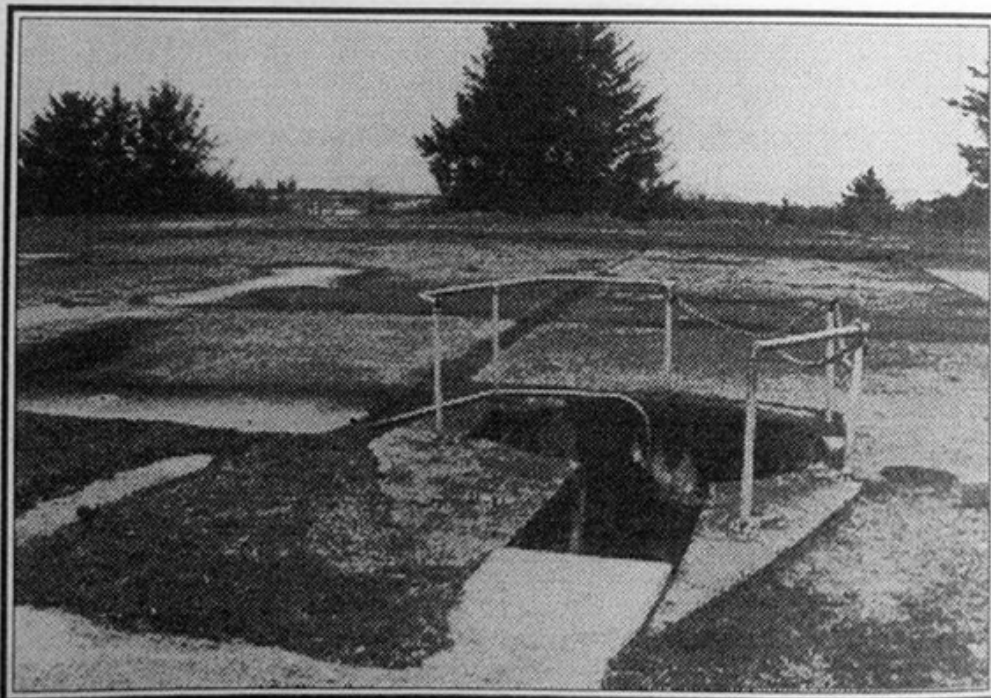
759th AC&W Sq. AN/CPS-5D long range search radar set (L), AN/CPX-2 IFF radar set (R), on top of Battery Mishler. 1951 photo courtesy Glen Miller



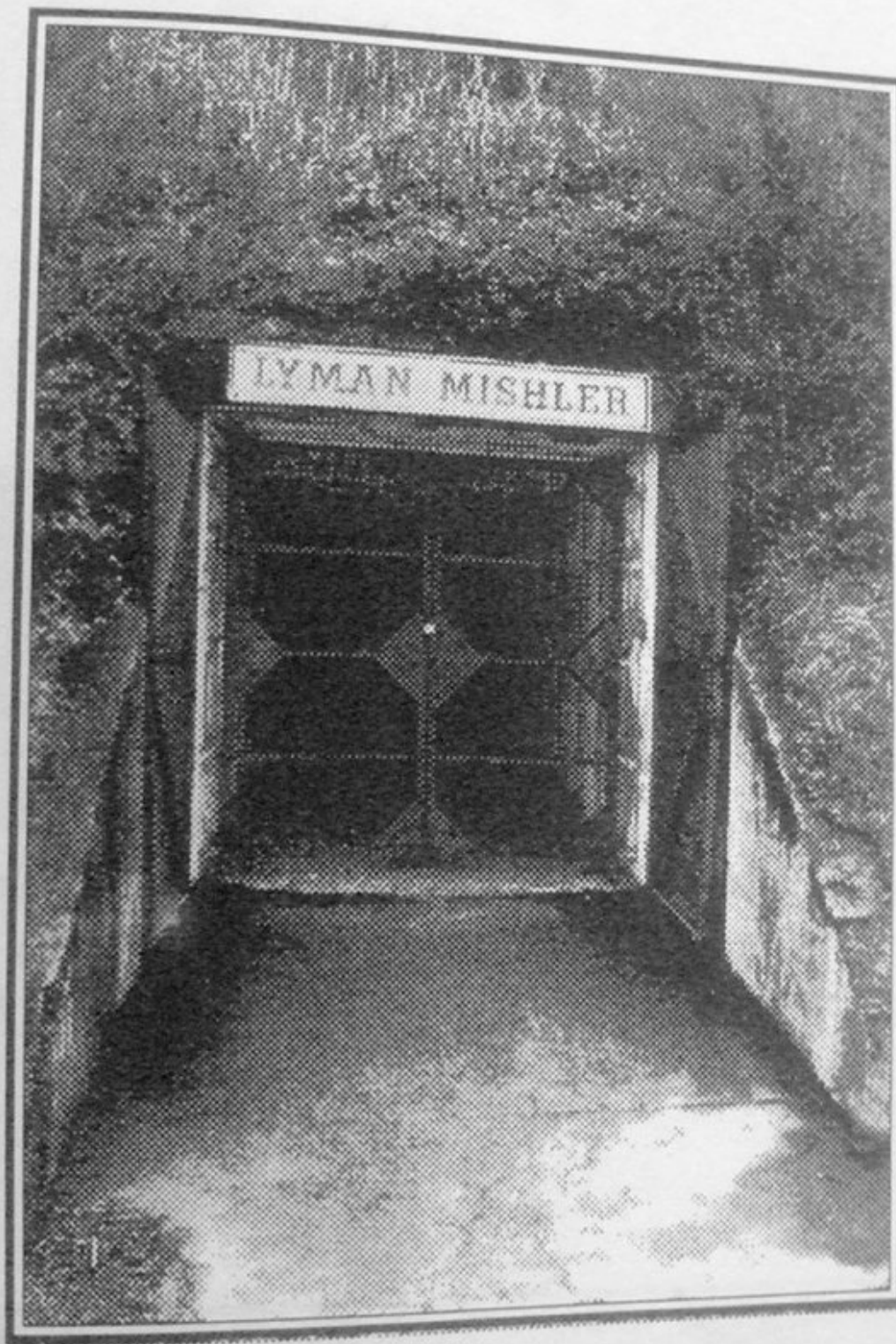
759th AC&W Sq. AN/TPS-1B portable search radar set on top of Battery Mishler. 1951 photo courtesy Glen Miller.



**AN/CPS-5D** Radar set antenna and tower on top of Battery Mishler. *(radar set photo courtesy of Historian, HQ /NORAD)*



**Access Stairway** on top of Battery Mishler, where radar set control cables went underground to the AC&W Operations area. *(1994 photo courtesy of FOOFS.)*

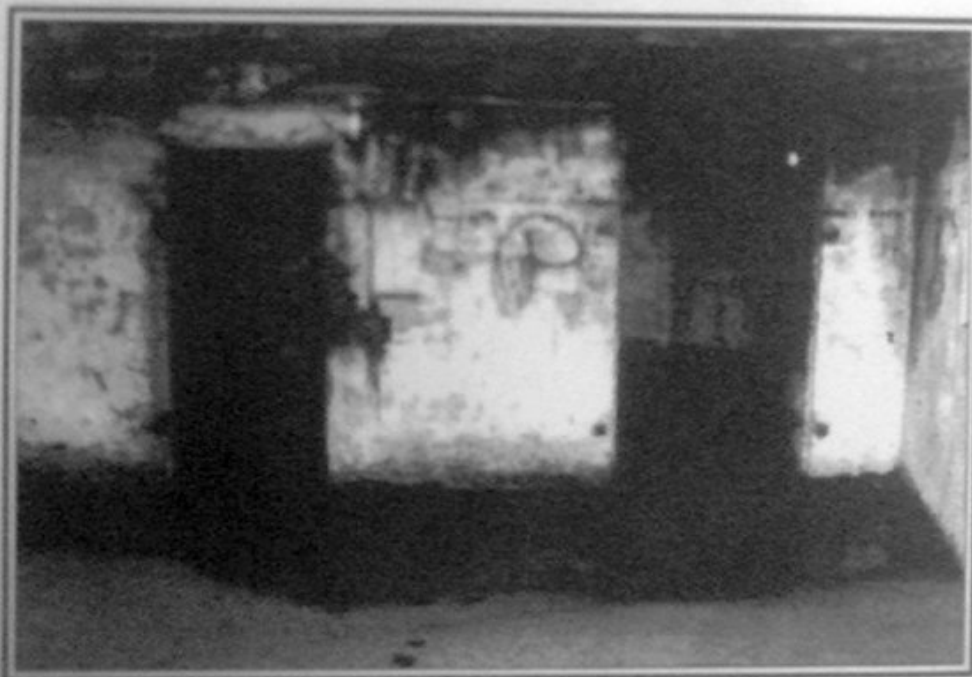


Entrance to the underground AC&W  
Operations Area in Battery Mishler  
(1994 photo courtesy FOOFS.)

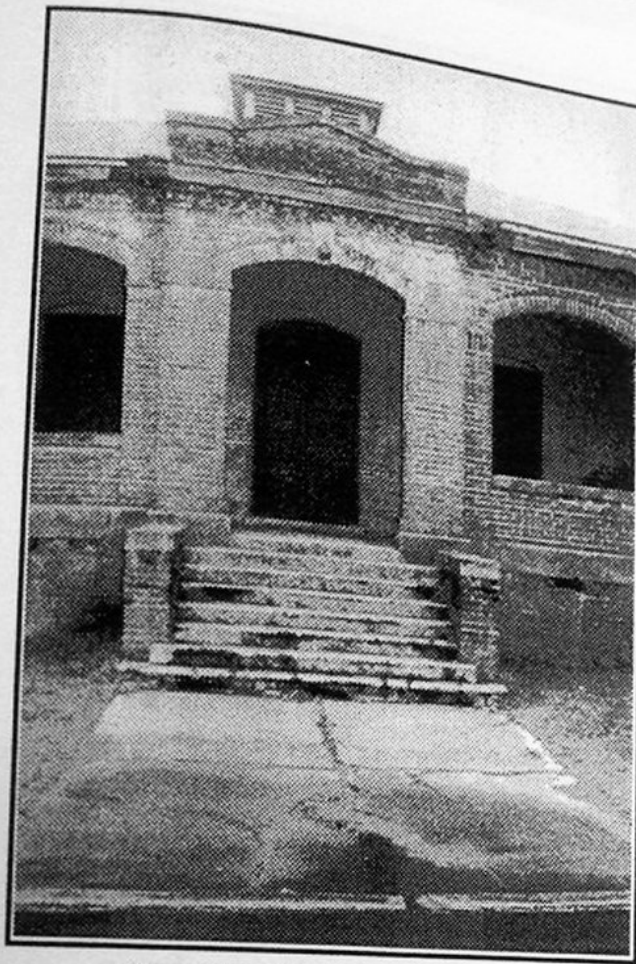




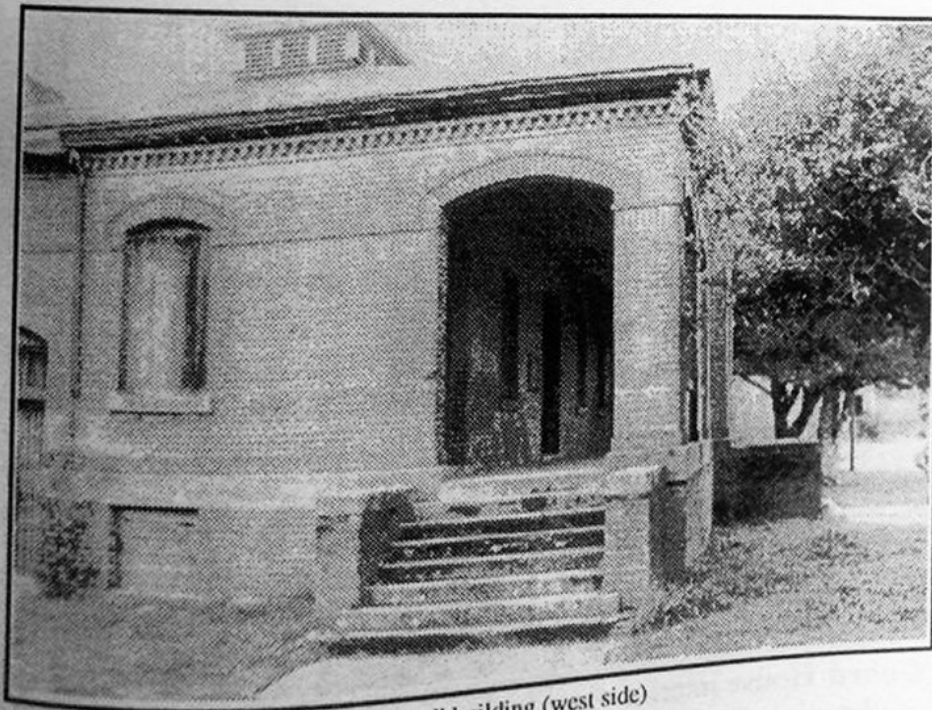
Underground AC&W Operations Area inside Battery Mishler. The interior of this room was destroyed by a fire set by a vandal in the mid 1960's. (1994 photo courtesy FOOFS.)



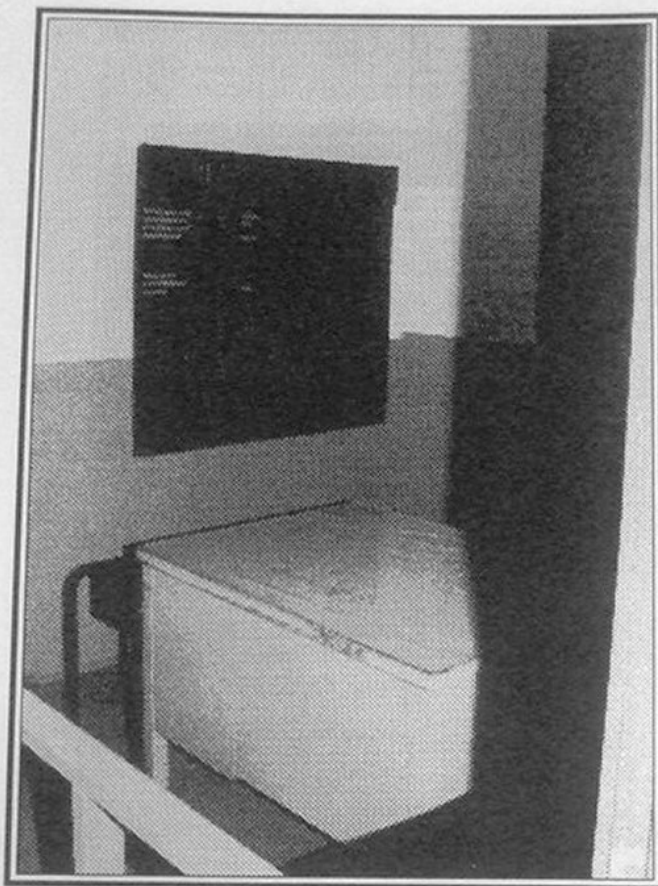
Passageway Area adjacent to the underground AC&W operations room. Door to left is where radar set control cables entered. (1994 photo courtesy FOOFS.)



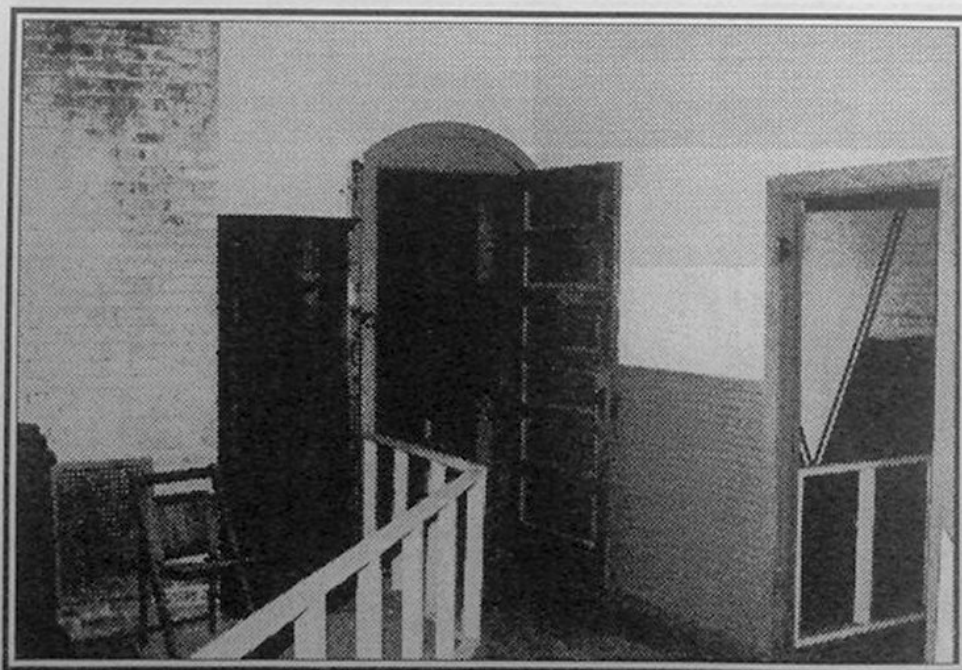
"Guard House" building (south side).  
Headquarters and Orderly Room for  
the 759th AC&W Sq. while at Fort  
Stevens. 1994 photo courtesy FOOFS.



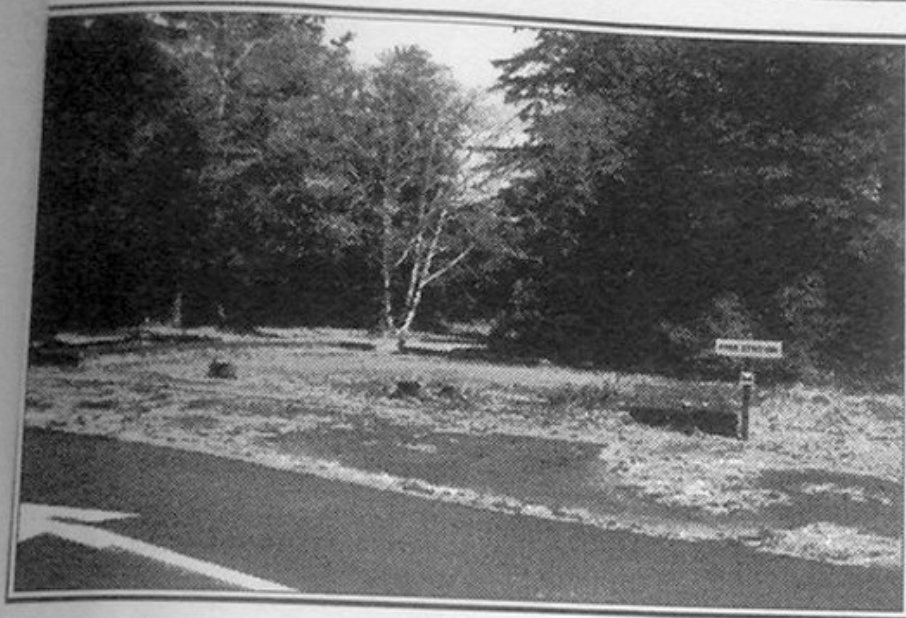
"Guard House" building (west side)  
1994 photo courtesy FOOFS.



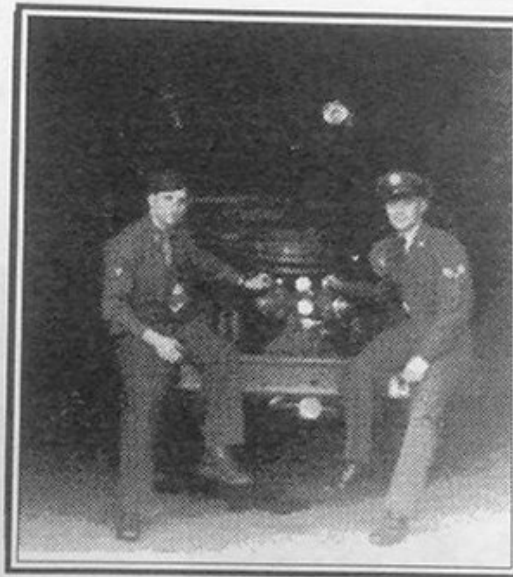
**Guard House** interior view looking into a room used by the Administrative Personnel. (1994 courtesy FOOFS.)



**Guard House** interior view looking toward the "Jail" Area in the rear of the building. (1994 photo courtesy FOOFS.)



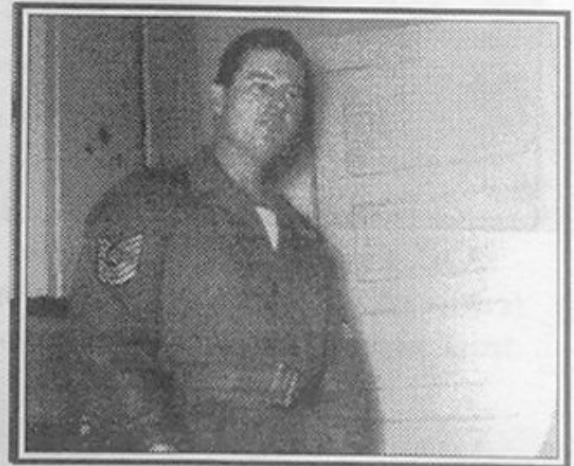
**Fire Station site.** The building was demolished in the late 1950's. (photo courtesy of FOOFS.)



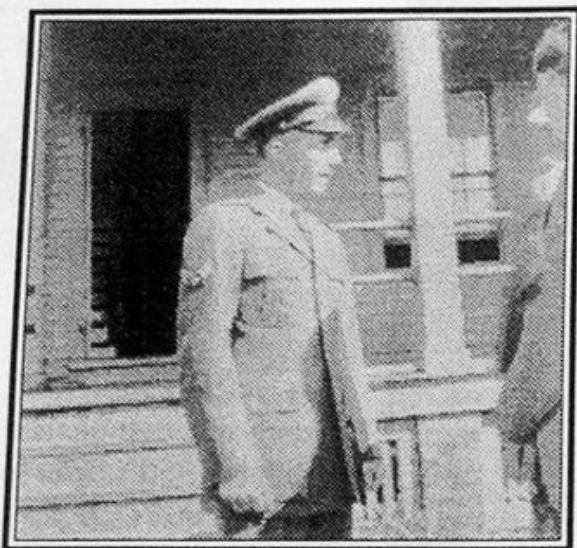
**A1C. Mathis (left) and A1C. Couch** at the Fire Station. (1952 photo courtesy John Piper.)



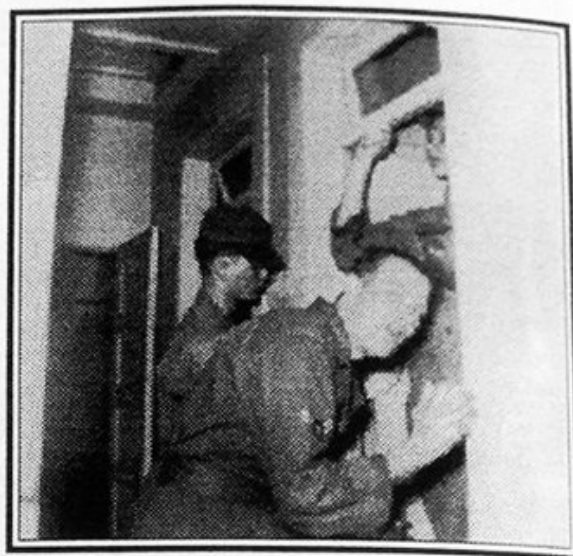
**C. Mathis (left) and A1C Couch** Quarters area, rear of fire station 52 photo courtesy of John Piper.)



**M/SGT James R Norwood** in kitchen area, rear of fire station (1952 photo courtesy of John Piper.)



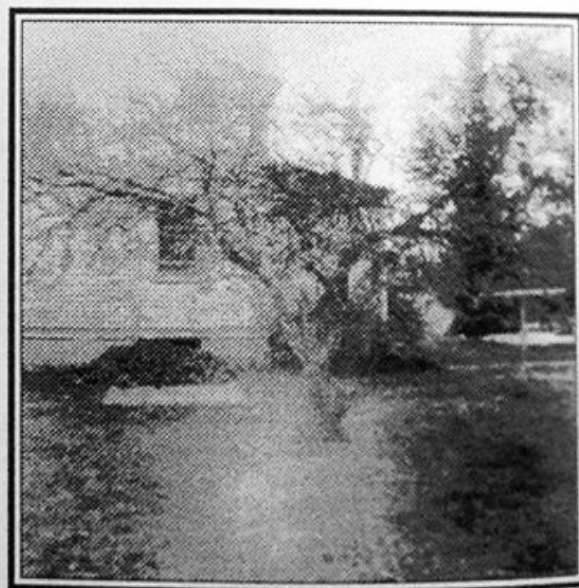
**A1C Ercel Cole** (*center*) in front of the barracks. (1952 photo courtesy of *John Piper*)



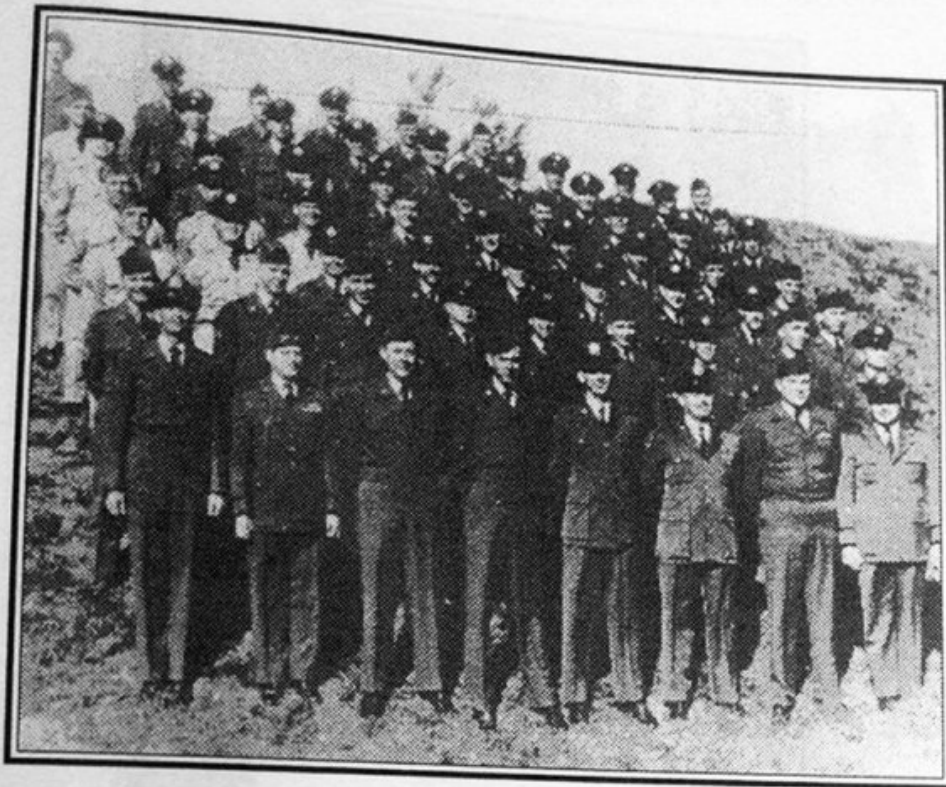
**AMN. Thomas Stowers** (*left*) A2C. **Adair** (*center*) A2C. **John Piper** (*right*) preparing for barracks inspection. (1952 photo courtesy of *John Piper.*)



**A2C. Piper** (*left*) **A1C. Mathis** (*center*) **A1C. Cole** (*right*) sitting on front steps of barracks. (1952 courtesy of *John Piper.*)



**Barracks used by Airmen** while at Fort Stevens. (1952 photo courtesy of *John Piper.*)



Photograph taken in late 1952 near the Battery Mishler earthworks of  
120th AC&W Squadron, personnel who were stationed at  
Fort Stevens OR.

*(Photo courtesy LTC. Earl F. White Ret.)*

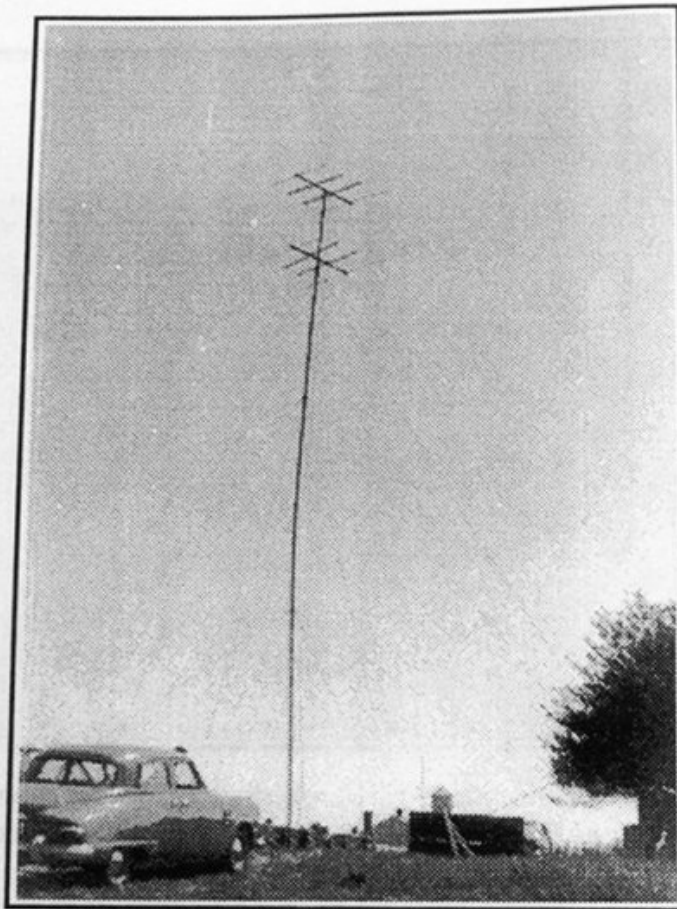
**Names of front row left to right:**

1st Lt. Harold D. Bradly, ANG Comm Off. Cpt. William E. Feild, Reg. AF Commander. 1st Lt. Horace M. Crowfoof, ANG, Radar Off. 2nd Lt. Don E. Williams, ANG, Supply, 2nd Lt. Edward S. Yates, ANG, Radar. 2nd Lt. Arthur O. Miller, ANG, Radar. Capt. Arthur N. Gentry, ANG, Adjutant. 2nd Lt. Edward Hatcher, ANG, Radar.

**Trivia:**

**A1C Charles Linz** - Directly behind Cpt. Field, went to Pilot Training upon release from active duty in 1953, remained in the Guard and retired in 1993 as a Brigadier General. He was the Assiatant Adjutant General for Air ARKANG.

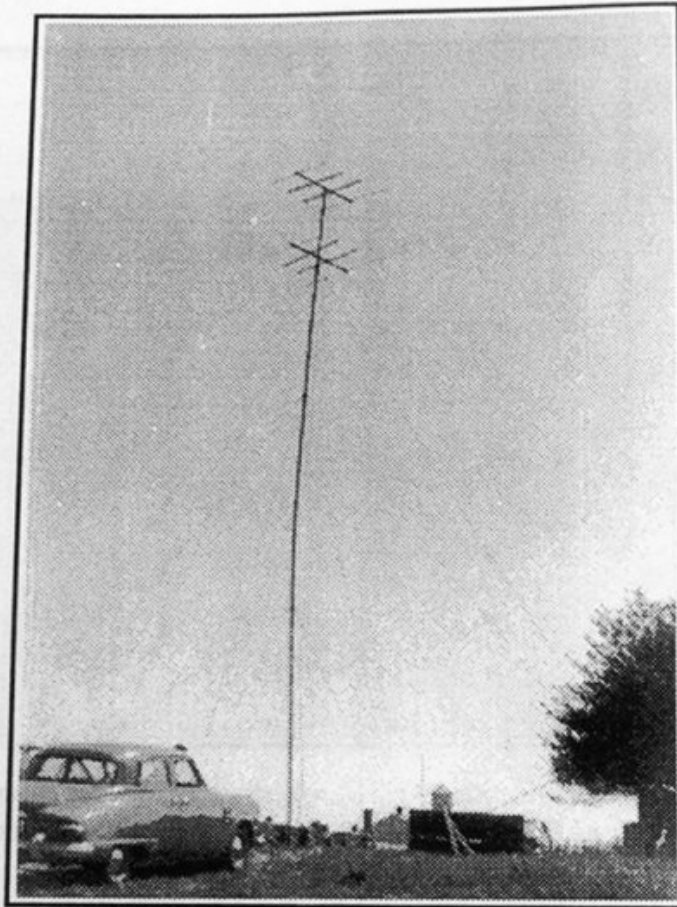
**Lt. Don Williams** - returned to collage and eraned a degree in Geology and was project engineer for the development of a cave system that is now a well known tourist attraction called Blanchard Springs Caverns.



Double Yagi antenna built by 759th AC&W Sq. personnel used to receive TV Channel 5 from Seattle. Site was on hill above the Communications Bunker. 1951 photo courtesy Glen Miller



Capt. Harold Owens (L), Rader Maint. Officer, Capt. Woods (R), Controller, 759th AC&W Sq. at their Ft. Stevens office. 1951 photo courtesy Glen Miller.



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Capt. Harold Owens (L), Rader Maint. Officer, Capt. Woods (R), Controller, 759th AC&W Sq. at their Ft. Stevens office. 1951 photo courtesy Glen Miller.





4th of July celebration/rodeo for 759th AC&W Sq. personnel held by the Town of Hammond on the old parade grounds. 1951 photo courtesy Glen Miller.