



CIVIL AERONAUTICS ADMINISTRATION, LOS ANGELES, CALIFORNIA

VOL. V NO. 1

JULY 1, 1957

PERIPHERAL PROGRAM OF AIRWAY TRAFFIC CONTROL COMMUNICATIONS

By

M. E. Zeigner

Air Navigation Facilities Division

The problem of providing adequate air traffic control, air-ground-air communications is one of the most vital problems confronting the CAA today. Until recently the control of airway traffic has been accomplished from Control Centers located at strategic points with no direct contact with the pilots. Within the last few years, the Controllers have been able to use direct radio for ground to plane contacts in the immediate area of the Center, but beyond that area, the Controller is still forced to rely upon inter-phone lines to outlying CAA communication stations and Airline company radio stations for the relay of information and instructions to the pilots and to obtain information from the pilots. With jet aircraft flying at speeds of 600 to 1500 miles an hour in the future, the Controller will be unable to rely upon relayed information for his control of aircraft. By the time the jet pilot requests a change in flight plan, the relay stations deliver the information to the Center, the Controller makes the clearance determination and the information is relayed back to the pilot, his 600 to 1500 mile an hour plane will have carried him well beyond his reporting point. This delay time necessitates larger and larger separations in air-space between aircraft and results in traffic delays.

In October 1956 Washington and Regional Operations and Engineering representatives convened in Washington, D.C. to draw up a comprehensive basic design for implementation of an improved Air Route Traffic Control System. Basically, these improvements were designed to meet the following concepts:

1. To provide direct Controller-to-Pilot communications in all air-space above 15,000 feet altitude.
2. To provide direct Controller-to-Pilot communications on all airways from the established minimum enroute altitudes up to 15,000 feet.
3. To provide "Express" High Altitude Transcontinental Tracks between the major East coast and major West coast terminals.
4. To provide radar coverage of all high traffic concentration areas.

(Continued on next page)

The communications portion of this program became known as the "High Altitude Perihperal Control Program." Webster defines the word "peripheral" in part as: "The line bounding a rounded or curvilinear surface." Since the boundary of a Center's control area in air space conforms closely to the definition, the word "Peripheral" as applied to the title of the program was considered quite apropos.

The communication system for the program was designed to give the best possible air-ground-air communication with respect to reliability and flexibility and so placed over the Center's control area so as to provide direct Controller-to-Pilot communications so that each controller may talk directly to a pilot at 15,000' and above in his control area at anytime. In order to do this, it was necessary to place a number of communication stations near the periphery of each control area. These stations have been termed "Peripheral Transmitter/Receiver Stations" for the purpose of this program. This Region will construct in the order of 60 to 65 of these stations to provide the necessary coverage of the air-space for 9 Centers in the Region.

An Aeronautical Chart depicting the 11 states of the Fourth Region will show that the geography of this area is the most rugged country in the United States, and also that the Fourth Region covers almost 1/3 of the territory of the continental U. S. When we appreciate the area to be covered and the terrain over which it is necessary to transmit radio signals to all altitudes, plus the fact that VHF and UHF signals are received generally only over line-of-sight paths, the amount of engineering required by this program becomes evident. Since the start of the program in December, the Communications Electronic Engineering Section and the Communications Plant Engineering Section have had from 4 to 8 engineers in the field continuously working on the problem of selecting radio sites which are to be so placed as to provide maximum coverage without unnecessary overlapping and with a minimum of radio interference from other radio stations. The problems involved in this survey work are many-fold, requiring, in some cases, as much as 2 to 3 weeks of search to find suitable siting facilities for some of the stations. Surprisingly, with as many accessible mountain tops as there are in the Region, many are already taken up with television stations, microwave relay sites and public service installations. Sandia Crest at Albuquerque has 2 TV, 1 USAF, 1 Forest Service, etc. plus CAA.

A good example of the scope of the job is the Los Angeles Control Center area. This area covers roughly that portion of Southern California north to Bakersfield and eastward to the California-Arizona boundary. Control of air traffic in the local Los Angeles area has been accomplished from our remotely controlled station at Saddle Peak, north of Pacific Palisades. In the program it was found necessary to establish a peripheral site at Santa Barbara, Bakersfield, Daggett and one at Julian, California.

The sites are selected taking into account all of the following factors:

1. Coverage (must be complete at 15,000' and above).
2. Accessibility for Maintenance.
3. Cost of establishing site.
4. Cost of control lines to site.
5. Minimum overlapping coverage.
6. Minimum interference from other agency radio facilities.

(Continued on page 4)



REGIONAL ADMINISTRATOR'S COLUMN

This issue of the News brings us to the close of a fiscal year and the beginning of a new one. I might be considered "facetious" by some in so doing, but I cannot resist the opportunity to wish you all a "Happy New Fiscal Year."

To say that the closing fiscal year '57 was the greatest in the history of the CAA would be only a mild expression of our accomplishments. The overall CAA records will show that never before have we undertaken so many new projects, and equipment purchases in one year; and likewise in the personnel field we expanded to a degree unprecedented in CAA history. Our accomplishments might not be considered great when compared with those of large Defense Agencies; however, with our limited trained staff I consider our achievements remarkable and a job well done. To each of you who contributed to this record progress, I want to say "Thank You."

The outlook for the New Year is again a challenge to all of us, notwithstanding press indications of budget cuts. Fiscal Year '58 will see the delivery of large amounts of equipment and the commissioning of many new facilities. In addition, we will continue our efforts to select sites, survey and construct facilities authorized in our new appropriations. All of these activities will require the continued wholehearted cooperation and efforts of all employees, which I sincerely request.

During '57 and again in '58 we will experience personnel increases both in the Regional Office and at Field facilities. Here at the Regional Office we have been engaged in numerous moves, changes, additions and improvements to accommodate this increased staffing. In a recent column, I outlined certain proposed changes and improvements which we, in the front office, felt would improve working conditions and provide more working space. These plans have now been completed and a good part of the "Officette" partitioning has already been installed. The General Services Administration is going forward with the modification of the heating and ventilating systems to reduce the noise level in the general office space. In addition, they will install plastic covered fibre glass material on the underside of the roof which should further reduce the noise level, improve the appearance and provide insulation against the summer heat. Work on these projects should be completed sometime in August. On the parking area problem, work should start almost immediately to expand the front parking areas and to provide additional spaces on both sides of the building. This should improve the outside appearance of the grounds, as well as provide much needed additional parking areas. Last but not least, GSA is about to award contracts for both inside and outside painting which should brighten up things a lot.

Elsewhere in this edition is an excellent aerial view of the Regional Office reservation. We included it mainly to let our good friends in the field know how we are progressing at the Regional Office. We felt too that this photograph will serve as a historical record of our growth and service in the Aviation Industry.

* * * * *

What makes up one of the peripheral stations? Essentially, a peripheral station is a group of transmitters and receivers which may be remotely controlled from the Center to perform the functions that any particular circumstance may require. Each of our peripheral stations will have from 4 to 16 transmitters and an equal number of receivers. This equipment will be housed in a modern concrete block structure around which will be placed the necessary radio towers to support antennas for the system. These radio towers will be guyed steel towers of a type similar to those used by TV stations and will vary in height from 30 to 100 feet. These stations will be unattended and will be visited by maintenance personnel on a weekly basis or as often as required to maintain continuous service.

The control of these remote stations will be accomplished by connections from the stations back to the Centers with leased telephone lines. At each end of these circuits we will have elaborate control equipment which will provide the Controller with a means of selecting any combination of transmitters and receivers that his needs may dictate. He will also be able to substitute standby equipment in case of failure of the main equipment. With the utilization of this standby equipment, together with availability of standby power at each remote facility, the system should be so reliable as to rarely encounter any communication failures that might jeopardize the safety of the flying public.

In the actual accomplishment of the construction work on the program, one of the first major obstacles that had to be overcome was the limited space available in the Region's control Centers. Each and every Center had no space to house the large quantity of new equipment to be installed for controlling the peripheral stations. Also, it was necessary to greatly enlarge the number of traffic control positions at each Center. In most cases, it was necessary to more than double the number of Controller positions in a Center. This Center alignment portion of the program will, for the most part, be completed by the time you read this article. This Center enlargement is intended only to provide the minimum space requirement to get the improved Traffic Control System into operation. It is anticipated and planned to provide new Center Buildings within the next 3 to 5 years for all Centers and these new Centers will be greatly expanded to provide adequate space and facilities for the following five years, or until about 1965.

It is planned to have this four million dollar 4th regional peripheral communication program essentially completed and in operation very early in 1958. Landline rentals for remote control will be approximately \$1,800,000 per year.

* * * * *

CAA TOASTMASTERS

How would you like to learn to speak as forcefully as Billy Graham?

See your nearest Toastmaster about joining the CAA Toastmaster's

Club!

* * * * *



HEADQUARTERS - REGION FOUR - LOS ANGELES, CALIFORNIA

COMMENDATIONS

We recently learned that the Lovelock ATCS had received a very nice commendation from the Commanding Officer, NAAS, Fallon. The letter stated, in part -

"On occasions when radio communication with NAAS Fallon Tower has been weak or for some unknown reason not satisfactory, Lovelock Radio without hesitation, has relayed messages, given advice of frequency failures and in general provided this command with the assistance required to continue operations.

"It is with great pleasure that the Commanding Officer, NAAS Fallon, Nevada, sends this letter of appreciation. All flights become increasingly pleasant when operating with such efficient stations."

We know that many of our field offices merit such bouquets, and it is a pleasure when we find that one of our customers has taken the trouble to acknowledge our services.

Nice going, Lovelock.

.....

Letters of commendation have been received from Director Naval Aviation Safety Center, commending Carl S. Kelley and Miss Stella R. Myers, of the Winslow, Arizona Station, for the part they played in the rescue of the personnel who parachuted from the Neptune Patrol bomber in the vicinity of Winslow, Arizona on January 27, 1957.

The pilot ordered the crew of 11 to bail out when the port engine caught fire and was feathered, the remaining engine soon began to fail, and the altitude and air speed both began dropping.

Mr. Kelley who had been in voice contact with the P2V shortly before the crew parachuted, saw the fire from the airplane crash. He and Miss Myers alerted the Chief of Police and Doctor Spirtos. Mr. Randall, Sheriff Patrol Member had a two-way radio in his truck and Mr. Kelley was able to direct him toward the burning aircraft. He soon had 6 of the 11 members in his truck and got them to shelter. At this time, another of the P2V crew, attracted by the lights, walked up and told of one man with a broken leg attended by another crew member. The party drove off to the rescue of the injured man.

A search group was led toward the crashed plane and the other two members of the crew were rescued.

Shortly before dawn on January 28, 1957, the rescue operation was completed and every one was safe in Winslow.

.....

Quoted is a letter addressed to the Administrator from Major General Howze, Director of Army Aviation, Washington, D.C., commending Santa Barbara personnel for services performed.

"The Chief of my Aviation Safety Division, Colonel James F. Wells, has reported to me an incident which I am certain would be of interest to you.

(Continued on next page)

"On May 20th he was flying an Army aircraft from Fort Sill, Oklahoma to Santa Barbara, California. The last leg of the flight was from Prescott IFR to Santa Barbara. The total flight involved 11 hours in very turbulent air without a co-pilot; Colonel Wells readily admits that he should have stayed in Prescott.

"On arriving over Santa Barbara omni he was cleared for an approach to the airport by Santa Barbara Radio; using an approach chart in fine print and a red flashlight to augment poor cockpit lighting, he began his transition to ILS on a heading of 253° descending to 4000 feet. About one minute from the omni, Radio called to check heading and altitude, and when advised, the operator told Colonel Wells that he was descending into a mountain. A pull-up and turn seaward allowed time for reorientation on the omni and an uneventful transition to ILS on the proper heading of 205° at 5000 feet. As the operator suspected, the pilot had read the wrong line on the approach chart.

"Colonel Wells and his passenger, Mr. Boyd Myers of NACA, presumably owe their lives to the alertness of the operators at Santa Barbara Radio. I wish to commend these individuals (Mr. Max W. Landis and Mr. Raymond G. Chase) to you for their attention to duty and their concern for the safety of airmen in a matter not their direct responsibility."

* * * * *

DIVISION HIGHLIGHTS

AIRCRAFT ENGINEERING DIVISION

Assembly of the first production Boeing Model 707 airplane is progressing on schedule. This airplane now is sitting on its wheels with the forward and mid-body sections joined with the inboard wing sections. Controls, electrical equipment, and wiring are being installed. Assembly of the second aircraft also is beginning and components for the third aircraft are being manufactured. Fire tests on the KC-135 pod presently are under way at the CAA technical development center. Evaluation of the basic loads data is continuing. Boeing has inquired regarding the applicability of the special conditions for the 707-100 series to the 707-300 series. CAA engineering representatives presently are investigating this subject at Boeing.

An engineering conference has been held regarding the Bee Craft "Queen Bee" airplane for the purpose of organizing the substantiation program for this model. It was reported that three aircraft are under construction and are approximately half finished. Three aft fuselages, three sets of wings, flaps, ailerons, and empennages have been fabricated. The present tentative plan is to assemble one airplane for CAA Type Certification tests after which additional aircraft will be assembled.

Basic loads reports for the Convair Model 22 airplane are scheduled to be submitted to the CAA on July 15. The proposed flutter substantiation program has been received and is being evaluated. Windshield bird-proof tests are continuing at Convair. Tests conducted to date on a 5 laminate windshield panel approximately 1½ inches thick have shown satisfactory retention and fragmentation characteristics at V_C for sea level operations; however, these panels were considered unsatisfactory when tested at V_C at 6000 feet. Additional tests are being planned using 7 or 8 laminate panels having a total thickness of approximately 1 3/4 inches. The release of some small

(Continued on next page)

components of this aircraft to manufacturing was scheduled for September; however, the program is being accelerated and present indications are these parts may be released as early as July.

The review of basic data pertaining to the Douglas Model DC-8 is continuing. Aerodynamic reports covering wind tunnel tests on $3\frac{1}{2}\%$ and 7% scale models have been received. The horizontal tail design criteria and loading analysis also has been received. The manufacturing facility at Douglas, Long Beach, was dedicated on May 10 and miscellaneous jigs and fixtures are rapidly being installed. The fabrication of wings, spars, and miscellaneous other structural components presently is under way. Some windshield tests have been completed at Indianapolis; however, the test report has not yet been received. Additional tests of eyebrow windows are being contemplated.

Douglas has indicated considerable interest in producing a turbo prop version of the DC-7 series. One such configuration including a 10-inch wider and 80 inch longer fuselage with increased speeds and operating altitudes has been discussed with the CAA for the purpose of determining whether or not such an aircraft could be type certificated under the provisions of CAB Draft Release No. 56-29. After considering the problem, Douglas was advised that such a program should be considered as a new type project under the provisions of CAR 4b.11(e).

Numerous inquiries are being received regarding the feasibility of type certifying military surplus Douglas C-74 aircraft. In each case the potential applicant has been advised that the substantiation program would be his responsibility. Military agencies have supplied this office with certain technical data which may be made available for the use of any bonafide applicant under such a program. It appears that one of the most difficult obstacles to be over-come would be the substantiation of the aircraft under the fatigue or fail safe requirement of the current CAR Part 4b.

The review of basic loads data pertaining to the Lockheed Model 188 Electra turbo prop airplane is continuing. Reports also have been received covering the Lockheed method proposed for the substantiation of fatigue characteristics and the fail safe design of this airplane. The fuselage structure for the number one airplane is estimated to be 90% complete. The fuselage for the number two airplane is approximately 15% complete. The outer wings for both airplanes are approximately 100% complete. The nacelles for number one are approximately 10% complete. Fabrication and assembly of other parts are progressing rapidly. Windshield tests on miscellaneous development configurations still are being conducted by Lockheed. The substantiation of the side windows has not yet been decided upon. The first flight of the R7V-2 airplane equipped with four production type engine propeller combinations installed is scheduled for the end of July. The start of the 1000 hour functioning and reliability test program on these four complete power plant assemblies is scheduled to begin in September. CAA Flight Test personnel are scheduled to participate actively in this program since this is considered to be a significant portion of the functioning and reliability substantiation for the Electra airplane.

Flight tests have been satisfactorily completed on the Lockheed Model 1649 series with the Pioneer PB-20 auto-pilot installed. Flight tests also have been completed on this model with Curtiss electric C-6345-C602/958-1C4-2 propellers installed and final approval on this configuration was issued on June 7.

(Continued on next page)

The preliminary Type Certification Board Meeting for the On Mark Engineering Company Model 450 airplane took place on May 21st and 22nd. CAA Type Certification for this model is scheduled for early 1959.

The pre-flight Type Certification Board Meeting on the Short Solent Flying Boat project was held on May 14 and 15. As a result of this meeting numerous miscellaneous items were discussed and identified as being necessary for completion prior to the resumption of CAA flight tests for Type Certification.

Production Certification Board annual surveys were conducted at the Convair plant on May 27 through 29 and at the Lockheed plant on June 3 through 5. The results of these surveys were considered satisfactory.

An inquiry has been received from a representative of the Curtiss-Wright Corporation regarding the possible installation of Wright TJ-38 turbo-jet engines in Douglas DC-8 and Boeing 707 aircraft. These engines were described as being two-spool engines having a take-off thrust rating of 12,500 lbs. on either a standard or a hot day. It was indicated that an application for type certificate on the engines probably will be submitted to the CAA Washington office in the near future.

AIR CARRIER SAFETY DIVISION

An Air Taxi Certificate was issued to Catalina Air Transport after the CAB had granted authority to operate the DC-3 under this part of the Regulations. This action was taken after proving flights were conducted at Catalina Airport and after a thorough investigation of the entire operations and maintenance phases had been satisfactorily completed.

Approximately 20 hours of flight time has been spent on the 1649 Constellation observing the check-out of TWA instructor pilots at Lockheed as well as the check-out of several captains under the new training agreement on this new type Constellation.

Discussions regarding navigational aids and communications are continuing with Western Air Lines in connection with that carrier's proposed Los Angeles-Mexico City service. A survey flight was conducted Los Angeles-Mexico City and return on June 8.

Airports at Hailey and Gooding, Idaho, were inspected for adequacy for DC-3 air carrier operation at the request of the CAB. Gooding was adequate, Hailey was not.

The Flying Tiger Line's domestic freight and international charter operations continue with emphasis being shifted to Constellation service as new L-1049H equipment is received. A general reduction on C-46, DC-4 and DC-6 operation has been effected concurrently with addition of the new Constellations. As of May 31, 1957, The Flying Tiger Line will operate ten 1049H aircraft as follows: three 1049H in scheduled domestic freight, six in international charter operations, and one in flight crew transition training.

The Flying Tiger Line has assigned 1,200 Constellation flight hours to local flight training. Additional flight crew training following transition is obtained through en route training and line checks.

It is reported that The Flying Tiger Line has been awarded a six months contract on the MATS Pacific airlift.

(Continued on next page)

On July 1, 1957, The Flying Tiger Line is closing its New York-New Jersey crew domicile base and all crews are being transferred to Detroit which will be used as the eastern crew domicile. The present routes will remain as established.

Southwest Airways is completing the plans for inauguration of service from Palmdale to Las Vegas. They presently contemplate using ARINC communications facilities for the new route structure.

Considerable time has been devoted to reviewing proposed manual material submitted by both California Eastern Aviation and Resort Airlines in connection with the operation of their recently acquired Lockheed 1049H type aircraft. A thorough ramp and equipment inspection was conducted at McChord AFB, Tacoma, Washington, prior to California Eastern's first 1049H trip on May 11, 1957, destined for Tokyo, Japan. Inspector White conducted an en route inspection on the second California Eastern 1049H trip between San Francisco and Tokyo on May 23 and 24. It has also been necessary to monitor the 1049H training programs for both pilots and flight engineers of both carriers.

The City of San Francisco is exploring the possibility of constructing a heliport on the waterfront in the vicinity of the Ferry Building in downtown San Francisco.

Alaska Airlines has purchased a newly overhauled DC-4 from the Flying Tiger Line and added it to their fleet of DC-4s. They have also returned a DG-4 that they had sub-leased from Flying Tiger Line which gives them a fleet of three DC-4s similar to what they have had in the past. Alaska Airlines has purchased a T-category C-46 converted by the Aircraft Engineering Foundation. This gives them one passenger C-46 and two cargo only C-46.

West Coast Airlines is continuing a heavy crew training schedule and has hired some new personnel as factory inspection representatives on the Fairchild F-27. The new personnel will also be used in the training of maintenance personnel as soon as the Fairchild is delivered to Seattle.

Great Lakes Airlines is preparing to start common carriage operation between the west coast and Honolulu and from the San Francisco Bay Area to Honolulu.

Pacific Southwest Airlines has purchased two more DG-4 aircraft from Capitol for delivery in October.

The Burbank ACSDO is processing an application for a Commercial Operator Certificate from Twentieth Century Aircraft, Inc., d/b/a Twentieth Century Airlines. This certificate will be operated by the same personnel as now operate Trans American Airlines and will be using three DC-4 aircraft now being operated by TAA.

Inspectors from the Denver ACSDO have been discussing with the USAF Academy Commandant and training officers the CAA Flight Navigator written and practical examinations being taken by the Academy graduates. A large number of AFA graduates are to be rated navigators and it was thought that our CAA exams could be used as a means to:

1. Educate the new USAF officers to the problems, in general, of the CAA;
2. Compare the navigational techniques of the USAF and civil aviation;
3. Aid the CAA in keeping their exams up-to-date.

The Boeing Airplane Company has flown number 11 KC-135 and has several more nearly ready for production test flight. Number 1 commercial 707 has the inboard wings and

(Continued on next page)

the forward section of the fuselage joined with the center section. The landing gear has been installed and Boeing has put an unusually large assembly crew on this project to move it as fast as possible. The rear fuselage sections have been completed by Ryan and delivered to Boeing, but to date these sections have not been joined to the fuselage.

A Commercial Operating Certificate was issued at San Francisco during this month. The carrier will operate under the name of California Pacific Airlines using one Douglas DC-3 aircraft. The headquarters of the carrier will be Oakland, California.

United Air Lines have installed two Sonotone Nickel-Cadmium batteries in one of their DC-6 aircraft for evaluation purposes. They formerly had planned to make the installation in a C-54; however, due to approaching retirement of the C-54's by UAL and the added safety feature of overvoltage protection provided in the DC-6, they have decided to make test aboard the latter aircraft.

United Air Lines have developed a new exterior lighting system which consists of high intensity lights to be located on the wing tips and tail in place of the conventional navigation lights. The colors will be the same as the navigation lights and the light from a sealed beam unit will be reflected by an oscillating mirror shaped to direct the light in the desired pattern to give maximum warning indication. They will test this system under the provision of Special Regulation 329B and installed on a Douglas DC-6 aircraft. The standard navigation and anti-collision lights will remain installed on a separate circuit for comparison of conspicuity. If successful, the system is proposed for UAL DC-8 aircraft.

GENERAL SAFETY DIVISION

On Mark Engineering have announced a new twin jet executive aircraft Model 450. The basic Douglas B-26 wing and tail surfaces will be used with extensive modifications. The fuselage will be semimonocoque cylindrical section with a modified 1049 Lockheed type nose.

Certification of airmen reached an all time high for Portland GSDO. One hundred fifty-nine airmen received new certificates or additional ratings, 46 of them brand new private pilots. The additional flying reflected in this increase of activity has had its corresponding increase in accidents, the only sad feature of the current boom.

Portland's first AROTC training program has been completed. Of the 39 who started, 6 were eliminated, 31 received private pilot certificates, the others did not qualify. Three flight instructors were used, and all training was given in Aeronca 7AC's.

Our Fresno GSDO reports during May, the last of 35 Agricultural Aircraft was inspected and approved prior to departure for New Brunswick, Canada for operations under the Canadian Forest Service Contract. Of paramount interest to this office was the condition of each aircraft presented for inspection. Each had been completely overhauled, both airframe, engine, and spray equipment. They were in new condition. Based upon present dollar value, they represented an investment of approximately \$420,000, as compared to about \$21,000 when purchased as war surplus about ten years ago. Of equal interest to this office is the progressive higher standards of maintenance and operation given such aircraft since wide-spread agricultural operations commenced after World War II. CAA's program of standards and assistance has been accepted and exceeded by the successful agricultural work operators.

(Continued on next page)

Consultation between Fresno GSDO and Fresno State College has assisted the college in arriving at the bid stage in its efforts to inaugurate an AROTC program. The target date for flight training is the beginning of the fall term, September, 1957.

The Air Force representative at the University of California at Berkeley has asked Oakland for a list of approved air agencies, so it appears that the University will be the first one in the Oakland area to participate in the ROTC flight program.

Inspectors Leckie and Davis participated in a round table discussion on "Complacency in the Cockpit" with Business and Executive pilots for the magazine Skyways which will appear in the July issue.

On May 26 Agents Sheehan and Grandy of the Cheyenne GSDO, attended a Flying Farmers' fly-in and breakfast at Douglas, Wyoming. There were 51 airplanes on the airport at one time, all of which flew in for the event. We spent considerable time discussing items with pilots, most of whom were private pilots. The event was carried on very satisfactorily and all operations were conducted in a safe and orderly manner.

The spray program for the control of grasshoppers in this state has been delayed due to the cold wet weather. However, we have been advised that the officials now believe it will start around June 10.

More student pilot certificates were issued in the San Diego district during May than in any month for the past five years. Issuances were 35% above their average monthly rate. Although other types of certification held at usual levels, the increase in new student pilots will, of course, be reflected in a similar percentage rise in higher types as training progresses.

On May 10, 11, and 12, celebrations were held in San Diego commemorating two anniversaries: the 30th anniversary of Lindbergh's take-off from San Diego prior to his trans-Atlantic flight, and the 50th birthday of the U.S. Air Force. A replica of the Spirit of St. Louis was flown over San Diego, and a "Parade of Progress" fly-by of modern air power was conducted with excellent control.

Seattle GSDO reports that at a recent Washington State Aviation Association meeting, a program to encourage safer and more skillful piloting in the form of a Champion Private Pilot Contest was discussed. The idea met with favor and it was felt that the WSAA should support such a program through finances from its special Private Flying Fund. The proposal is primarily as follows: An annual contest would be set up through competition to determine the best all-around pilot in the State. A trophy would be purchased to be awarded to the pilot chosen at the close of the contest.

The contest would be carried out with the cooperation and assistance of the three CAA district offices in Washington State. Any private pilot would be eligible to enter provided he had not been guilty of any safety violation. The contest would consist initially of passing a written examination to be developed by the WSAA and administered by CAA district offices. Upon successful completion of the written examination, the applicant would be given a flight check by a CAA Safety Inspector and graded on his performance and general knowledge.

Through the written examination and the flight checks the applicants would be eliminated until five or ten top candidates remained, and these pilots would be further checked against each other to determine the best pilot. Award of the trophy would be made
(Continued on next page)

at a final ceremony with those participating in the contest and various officials attending. The winner would be awarded the trophy for one year as well as a permanent plaque.

It is anticipated the contest will be inaugurated in 1958.

AIRPORTS DIVISION

Grant Offers were issued during the month to the following: Beckwourth, California, \$16,200 for construction of bituminous treated runway and taxiway; Monterey, California, \$42,200 for installation of high intensity and medium intensity lights; Bakersfield, California, \$138,784 for land acquisition, construction of taxiway and apron, entrance road, walks, fencing, seeding and extension of utilities; Riverside, California, \$58,615 for land acquisition, installation medium intensity lighting system and fencing; San Diego, California, Lindbergh Field, \$47,000 for construction of perimeter road; Santa Monica, California, \$20,056, construction of entrance road, install obstruction lights and fence; Craig, Colorado, \$50,750 for construction and surfacing runway, taxiway and apron and relocation drainage; Lamar, Colorado, \$47,668 for land acquisition construct N/S runway, taxiway and apron, install medium intensity lighting system and flood light apron; Longmont, Colorado, \$30,087 for paving runway, taxiway and apron and install medium intensity lighting system; Missoula, Montana, \$214,265 construct overlay on runway, taxiways and apron; Las Vegas, Nevada, \$249,027 for land acquisition, relocation of road and utilities; Eugene, Oregon, \$16,276 for land acquisition; Medford, Oregon, \$37,440 for land acquisition; Spanish Fork-Springville, Utah, \$32,164 for land acquisition, entrance road, terminal building, fencing, obstruction removal and runway paving; Seattle, Washington, Boeing Field, \$361,116 for land acquisition, relocate utilities and fence; Pascoe, Washington, \$26,085 for installation medium intensity lights and obstruction lighting; Pullman-Moscow, Washington, \$58,322 for land acquisition, pave taxiway and auto parking area, construct administration building and fence; Rock Springs, Wyoming, \$19,445 for runway surfacing.

Project Applications were received from the following locations: Clifton-Morenci, Arizona, \$54,086 for paving runway; Casa Grande, Arizona, \$10,354 for administration building and utilities; Phoenix, Arizona, \$113,894 for equipment storage and maintenance building; and extend and light taxiway; San Jose, California, \$341,542 for land acquisition, drainage and realignment of Guadalupe River, construct aircraft parking area and road and utilities to control tower; Grand Junction, Colorado, \$184,422 for runway reconstruction and enlarging terminal building; McCall, Idaho, \$12,871 for land acquisition and starting pads both ends of runway; Pendleton, Oregon, \$32,199 for land acquisition; Monticello, Utah, \$75,160 for land acquisition, construct runway, taxiway and apron, fencing; Greybull, Wyoming, \$77,438 for paving runway, taxiway and apron; Jackson Hole, Wyoming, \$42,391 for administration building; Sheridan, Wyoming, \$35,432 for enlarging administration building and sewage disposal system.

AIRWAYS OPERATIONS DIVISION

Bob Graner and Ed Nollenberger participated in a formal operational evaluation of Decca Airport Surface Detection Equipment at Seattle. The evaluation was discontinued after two days of operations because precipitation in the form of drizzle renders the unit unusable.

(Continued on next page)

Our concurrence in the location of the Denver ARSR-1 antenna at Parker and the Los Angeles Center building on San Pedro Hills was forwarded to the ANF Division.

The new training quarters for the Los Angeles Center were placed in use and the borrowed quarters were returned to the ANF Division.

Rent-free space requirements for ATC field facilities are being reviewed in order that space for programmed activities will be available when needed. This is being done in collaboration with the ANF and Airports Divisions.

The new Stockton Control Tower is scheduled to begin operations August 15.

Len Middlekauff met with representatives of Castle AFB and 15th Air Force regarding proposed airway structure in vicinity of Castle AFB. We believe the Air Force will now withdraw objections to the proposed Modesto-Tonopah airway.

Twenty cases were prepared for the Regional Airspace Subcommittee during the month.

The Seattle Center and Boise Tower will begin training Air Force personnel immediately in preparation for establishment of approach control service at Mountain Home.

Several of our Los Angeles Center and Los Angeles Tower personnel were permitted to make familiarization trips on the new French Caravelle.

Elmer Butler, Chief of San Francisco Oceanic Station, attended meeting in Washington to assist in developing U. S. position in forthcoming ICAO Teletypewriter procedures conference.

Messrs. Hongiyo and Yamada of ATC, Tokyo, spent two weeks in the Regional Office and nearby field facilities studying U. S. technical and administrative procedures used in Centers, Stations and Towers.

Mr. Simnad, Deputy Director of Civil Aviation in Iran, spent two weeks visiting various Divisions in the Regional Office. His chief interest in this Division is administrative methods used in air traffic control and communication. He plans to spend several days in the overseas station at San Francisco before proceeding east.

A team of Airways Operations and Aviation Safety people are working with Navy representatives to develop suitable procedures for departure of high performance of jet aircraft operating from Moffett and Alameda.

The Salinas Station has moved into its new quarters at the Municipal Airport.

Messrs. Garrison, Stephens and Fulkerson from the Regional Office and several representatives from ATC facilities in the San Francisco Bay region participated in a meeting at San Francisco dealing with ICAO procedures and oceanic operations.

Art Johnson, in company with Messrs. Plett and Brant, participated in a meeting of all Air Route Traffic Control Center Chiefs at Omaha. While there, they visited SAC headquarters at Offutt AFB. (Continued on next page)

Howard Firebaugh, together with ADLOS Knenlein and Cramer of Region 3, attended a meeting at Bismarck to discuss a proposed North Dakota Civil Aviation Defense plan and assist in developing procedures for the plan. A similar meeting was held at Pierre to assist the State Director of Aeronautics in developing fan-out procedures for South Dakota. Mr. Firebaugh also visited many field facilities in Montana, Wyoming, North Dakota and South Dakota.

Glen Simonson delivered a talk to Air Force pilots attending the instrument school at Hamilton AFB on matters pertaining to CAA and Air Defense.

Bill Larsen visited all facilities in Nevada, plus Wendover. Ken Wall accompanied him.

FACILITIES DIVISION

Navigational Aids

Contracts have been awarded as follows: Construction of VORTAC facilities near Oceanside and Long Beach. Installation of new approach light systems at Spokane and Burbank. Construction of mountain-top VOR's near Gorman and Lake Hughes.

Construction of new VOR's commenced near Drake on June 17 and at St. Johns and Las Vegas on June 24.

A new VOR site was selected and flight tested near Tuba City as a replacement for the formerly assigned Chinle facility.

Crew has proceeded to Mina to flight test VOR in that area.

Lloyd Stewart and crew completed the Myton VOR.

Harold Wailes and Hank Scribner started IIS relocation site test at Spokane.

Noel Ledbetter and crew started VOR site test at Avenal.

Radar

Messrs. Orville, Aldridge, Diehl and Orr attended a meeting of the Air Defense Command/CAA Committee at the Alameda Naval Air Station on joint use planning of long range radar.

Reflector locations for the Airport Surveillance Radar were established at the Kirtland Air Force Base, Albuquerque, New Mexico.

A survey crew is at Francis Peak, 20 miles northeast of Salt Lake Municipal Airport, obtaining engineering information for the long range radar installation. The electronics survey is held up on account of weather.

The engineering survey for the Spokane Long Range Radar installation has been completed on Wright's Hill, 7 miles southwest of Geiger Field, Spokane.

An electronics survey is being conducted for joint CAA/WADC usage of radar facilities in the Spokane area.

Long range radar ARSR-1 site evaluation has been completed for South Mountain site and Sky Harbor Airport site.

Don Hughes and Rex Brown are at Albuquerque whipping the PAR (FPN-16) into shape.

(Continued on next page)

VHF/DF equipment for the Los Angeles Air Traffic Control Center is being installed by Elliott Johnson and James Mappin.

Acceptance inspection on VHF/DF at Seattle was held June 20.

Communications

Sites have been selected and surveys completed at the following VHF/UHF Air/Ground Communication Facilities: Billings, Butte, Boise, Angeles Camp, San Jose, Mountain View, Los Angeles (Regional Office Site), Las Vegas, Winnemucca, Thermopolis, Zuni, Horton, Salt Lake City and Price.

Construction began during June at the following VHF/UHF Air/Ground Communication Facilities: Julian, Fresno, Tonopah, Pioche, Seattle, Yakima, Raton, Roswell, Denver, and Miles City.

Construction has been completed, with the exception of the engine-generators which will in most cases be deleted and installed under a separate contract at Pueblo, Truth or Consequences, Farmington, Bakersfield, Santa Barbara and Portland.

Construction of a 37.5 KVA Standby Power Facility at the Oakland International Airport began June 13, 1957.

Electronic installation at Stockton Tower is now in progress.

Electronic equipment installation was started on June 3 at Elko (Elko Mountain) VHF/UHF/ A/G communication facility.

Additional control equipment has been installed at Price and Lander temporary VHF/UHF A/G communication facilities. These sites will be commissioned about July 1.

.....

A welcome is extended to the engineering students who will be working with us this summer under the Student Training Program. These men have been given a week's orientation in the Regional Office and have now been assigned to various locations within the Region. Again, we say "welcome aboard" to - Maurice Collins, Lonnie Griner, Harold Ferguson, George Buchanan, Carl Hopkins, Ray Lubeck, Frederick Waldo, Torao Yoshida, Richard Burns, Hilton Gabrielsen, Donald Griffin, Charles Kallander, James McAnally, James Scott, Robert Whitney, Jack Willmore, Edward E. Golden, Kenneth R. Moore, Ronald O. Olmstead, David O. Yurushima, Edward White, Delmont Davis, Jr., Stanford Larson and Chas. W. Pilgrom.

We are happy to announce the entrance on duty of new employees, Ludwig T. Erzen and Edward Fermelia, recent Civil Engineering graduates.

.....

Maintenance Engineering Branch

Hubert Huber participated in a comparative system performance check of four of our five ASR=2 facilities and an intensive two week evaluation of the Decca Airport Surface Detection Equipment at Seattle-Tacoma tower in cooperation with Washington Office and ANDB representatives. The results of the ASDE evaluation will serve to
(Continued on next page)

finalize the new ASDE equipment specifications for FY 1958 procurement of taxi-control radar for the Los Angeles, San Francisco, Portland and Seattle-Tacoma Airports.

David Earley attended meetings of CAA and military personnel concerning joint-use of long range radar facilities. Although plans are not yet final it is likely that CAA will maintain most of the long range radar equipment at these joint-use facilities.

Glen Mains, CATFO at Seattle, suffered a heart attack on May 31 and has been in the Group Health Hospital at Seattle. Information received from Seattle indicates Mr. Mains should be home now and we hope he will make a quick recovery and be back to work in a short time.

Recent graduates from the Aeronautical Center are: Hans Anderson, Los Angeles, California, Kenneth F. Brooks, Long Beach, California, James Eggers, Salt Lake City, Utah, James K. Shafer, Albuquerque, New Mexico, Robert W. Gordon, Fairchild Air Force Base, Spokane, Washington, and John Phillips, Los Angeles, California -- SR/PAR Class No. 117; Donald E. Goodman, Los Angeles, California, Robert E. Mills, Las Vegas, New Mexico, John E. Shoelen, Tucumcari, New Mexico, Max E. Cobb, Laramie, Wyoming, Walter Freas, Ukiah, California, and Stephen Jones, Malad City, Idaho -- Communications Equipment Class No. 74; Lawrence L. Cheskaty, San Diego, California, Thomason Fuher, Salt Lake City, Utah, Beryl Dewey, Burbank, California, and Thomas Hazen, San Francisco, California -- Communications Equipment Class No. 75.

* * * * *

Supervisory Meeting - Boise, Idaho

The monthly meeting of the Boise, Idaho supervisory personnel was held in the office of Leslie H. Klahn, Chief, ATFO on June 7. In addition to Mr. Klahn the meeting was attended by Chief, CS/T Harry L. Bergey and Supervising Inspector, General Safety District Office A. G. Witter. Chief, ATDO Reynold F. Johnson was out of the city on annual leave.

Subjects discussed were: personnel and pay, insurance, additional scheduled facilities and technical development.

Friday, July 12 is the date selected for the CAA picnic. A fireplace and picnic area were reserved at the Municipal Park for 5:30 PM. We anticipate that between 50 and 60 adults and children will attend.

* * * * *

CARL BUCKLEY RETIRES

Carl Buckley, CATFO at Lucin, retired on June 30th. Mr. Buckley started his Government career in June, 1930, as Assistant Airways Keeper under the old Light House Service. His progress kept pace with the growth of the organization. We wish Carl "Happy Days" in his retirement.



Personnel Pipeline

Retirement Information

We have had several inquiries whether an applicant for annuity who is receiving retired pay which bars credits for his military service, may elect to surrender such retired pay and have his military service added to his period of Civil Service, so he can get a greater benefit in the form of an annuity. The Civil Service Commission will determine whether the annuity by such procedure will be greater or lesser. At this point, the annuitant can exercise his right of election.

A New Wrinkle on Group Life Insurance

From time to time employees have asked whether they may provide for payment of benefits under the Federal Employees' Group Life Insurance Act to the survivor or survivors of a named beneficiary in the event of his or her death.

The Civil Service Commission had advised us that in the execution of SF-54, "Designation of Beneficiary," for payment of group life insurance, employees may not stipulate that insurance shall be paid to a "survivor" or "survivors" of a named beneficiary in the event of his or her death. Where it is desired that payment be so made, the name (or names) of the survivors of the beneficiary must be listed on SF-54.

On the other hand, there is no restriction on the naming of contingent beneficiaries. The following example indicates how this may be done under the heading on SF-54, "Information Concerning the Beneficiary or Beneficiaries":

John Albert Henry, if living-- 810 West 80th St., N.Y., N.Y. -- Husband -- All

Otherwise to:

Ellen Anderson Smith -- 35 Park St., Landon, Ohio -- Sister -- All

Employees have also asked whether they may make provision for delayed payment of benefits, in the event of a common disaster to both the employee and his named beneficiary, in a manner similar to that under some private life insurance policies.

The Civil Service Commission has advised us that a hiatus period delaying the vesting of title to receipt of the insurance payment is not valid and, therefore, should not be inserted on SF-54. Where an employee wishes to make provision for disposition of the insurance payment in the event of a common disaster involving both the insured and his named beneficiary, he may name his estate as beneficiary on SF-54 and stipulate in his will any particular conditions or restrictions he wishes his executor to follow in handling this money.

(Personnel Pipeline continued next page)

Civil Service Inspection

Two inspectors from the Civil Service Commission devoted 2 weeks during June to inspecting the Region's Personnel system. Both of these inspectors were here four years ago, and according to their own statements were very much amazed at the tremendous growth and expansion of CAA's programs. Both commented on how lucky all of us were in being connected with a Federal Agency that had such an interesting and diversified program. These favorable comments were invoked despite the tremendous disruption in the regional office area, the least of which is certainly not the building modification program in the regional office.

Interested in Some Employee Statistics?

According to a report just released by Washington, there were 8,111 veterans in the Airports Operations Specialists group, and 1,263 non-veterans in the 9,374 employees surveyed. Among the 8,111 - 1,920 are connected with the reserves and 913 currently are in the ready reserves. Of 118 employees holding the title of Air Carrier Inspectors, 112 are age 36 or over. 105 of them are veterans as opposed to 13 non-veterans. 63 of the Air Carrier Inspectors are affiliated with the reserves. The above statistics should give a good indication why there is considerable concern by CAA in the event of an emergency program where the reserves are called in to immediate duty.

Business is Booming

During June, 24 electronic and civil engineering Student Trainees representing 14 Western colleges reported for orientation and field assignments under our Summer Student Trainee Program. Eight of this group were returnees from last summer's program, while the other 16 were engineering school seniors, entering C.A.A. for the first time.

Three recently graduated engineers also joined the Student Trainee group for the week's orientation which included presentations by the Branch and Section Chiefs of the Plant and Electronic Engineering Branch, and a full days field trip to the local Air-Navigation Facilities.

One aeronautical engineer, who graduated from California Polytech this month, reported for duty with the Power Plant Branch of the Aircraft Engineering Division.

Dr. David Carter, associate professor of Engineering at San Jose State College, joined the engineering staff of the ANF Electronics Engineering Branch for the summer under a new program designed to place Engineering School faculty members in civil and electronic engineering positions during the summer months.

Dr. Carter has been assigned to the Radar Section working on antenna radiation problems pertaining to our new long-range radar.

C.A.A. Exhibit

An exhibit depicting the role of C.A.A. in aviation was shown at the West Los Angeles Fair. This exhibit which included receivers tuned to the Los Angeles Tower, Center and Station, a large Federal Airways map and mural, and models of prototype aircraft among other things was developed as a recruiting and public relations device.

SUGGESTION SYSTEM

We pointed out last month that the Washington log jam on suggestions has been broken. Five of the six awards made this month resulted from national adoption of suggestions.

The adopted ideas are representative of the types we are receiving: a better way of doing the job, a method for reducing costs, and a device for eliminating a safety hazard.

The following employees were recognized for a contribution to improved operations:

Jeanne M. Mallory, ANF Division, Maintenance Branch, Seattle, suggested a revised index of Washington Circulars EFl and AEF1 listing each individual type of facility on a separate sheet. Adopted nationally. Award \$25.00

Flora R. Frischling, ANF Division, Facilities Establishment Branch, Drafting Unit, designed a device for use on Ozalid machine cutting wire to eliminate the hazard of the operator cutting her hands. Award \$25.00

Edward J. Porten, ANF Division, Maintenance Branch, Seattle, suggested ASR-2 Stalos be lubricated with a light weight non-parrafin oil in lieu of Lubriplate 110. This improved method was adopted for general use throughout CAA. Award \$50.00

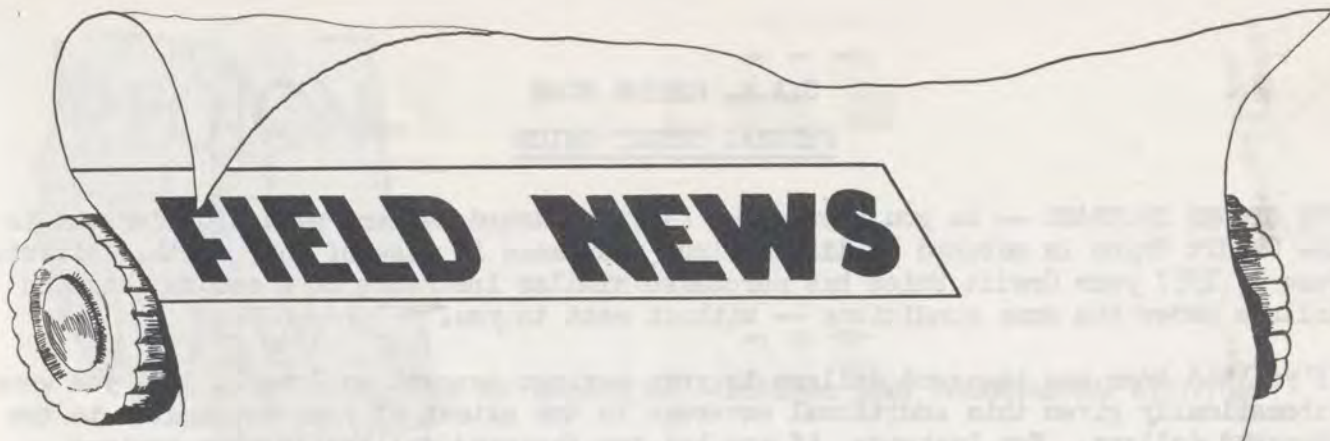
Kenneth L. Willits, ANF Division, Maintenance Branch, suggested saving insulated mail bags for reuse. Adopted nationally. Award \$25.00 by Washington in addition to local award of \$10.00, previously made.

E. M. Whitney, ANF Division, Electronic Engineering Branch, suggested a modification of the CA-1430 test generator. This will assist in operating and adjusting the equipment. Adopted nationally. Award \$50.00

Eugene L. Campione, ATC Division, Operations Branch, Great Falls, suggested elimination of Drawing M-58 with transfer and presentation of information to appropriate Communications Service System drawings. As a result of this suggestion, Drawing M-58 will be discontinued and the information included in the Service A, C, and O drawings as appropriate. Adopted nationally. Award \$50.00

* * * * *

- Q. Sections 3492.1 and 3492.21 of Standard Practice revision dated 6/16/57 appears confusing as to compensation paid for night differential while on leave with pay. How are they applied?
- A. S.P. 3492.1 applies only to Classified employees. S.P. 3492.2, .21 and .22 applies to Wage Schedule employees.



PENDLETON, OREGON

AIRWAY TECHNICAL FIELD OFFICE - The following are some highlights of the last few months -

D. R. Conrey has the dubious distinction of arriving in Pendleton (last winter) on the coldest day in 30 years. 28 below zero! This cool reception was compensated for by the fact that Dick Cruger had a house lined up ready for him to move into.

This Spring, Robert Sikes became an expert on snow-shoes. He's from Blythe.

We recently welcomed to our group, Ed Hamer, a former United Airlines employee from Denver. He has been getting the works breaking in on VOR, Low Frequency Range, etc.

In June, maintenance personnel attended a fire-fighting demonstration conducted by United Airlines. A film was also shown titled "Not Too Hot to Handle." Persons seeing this film may well learn some facts about fire they didn't know before. It is an excellent film, and well worth seeing.

Co-workers will miss Al Erickson, Electronic Specialist, who is resigning in July.

Emergency landings in Pendleton are handled so smoothly by tower personnel they are considered routine. Recent arrivals here on one engine are a C-119 and a C-46.

STOCKTON, CALIFORNIA

COMMUNICATIONS STATION - In the rural sections surrounding Stockton, there is an estimated 3,800 acres of Bing cherry orchards. Due to the unseasonal rains at cherry ripening time an estimated 5 million dollar cherry crop was endangered because the wet fruit, when exposed to the sun, splits and spoils. In an effort to save as much of the crop as possible, the services of the Stockton Helicopters (commercial dusters) and 13 Army helicopters based at Stockton Airport, were enlisted. The mission of the copters, when the rains ceased, was to hover over the orchards, blow the moisture from the trees and dry the fruit.

The Army copters were not built for this type of operation being loaded with heavy equipment such as radio gear and other technical material, which made their handling difficult. However, the cherry growers and civilian pilots were lavish in their praise for the work accomplished by the military pilots.

All in all it was a very successful operation and not only saved an estimated 70 to 80 per cent of the cherry crop but the earnings of from 4 to 5 thousand cherry pickers.

* * * * *

C.A.A. REGION FOUR
FEDERAL CREDIT UNION

THE SECOND THOUSAND -- As you know, your first thousand dollars placed on deposit in the Credit Union is matched by life savings insurance in case of your death. Effective June 1, 1957 your Credit Union has purchased similar insurance on a second thousand dollars under the same conditions -- without cost to you.

If you had over one thousand dollars in your savings account on June 1, 1957 you were automatically given this additional coverage to the extent of your savings up to two thousand dollars. For instance, if you had two thousand dollars in your savings account on May 31, 1957 which as an estate was worth \$3,000 on June 1, 1957, it was worth \$4,000 as an estate.

The opportunity to build an estate through the Credit Union's Life Savings Insurance Plan is available to all CAA employees and family members living under the same roof. If you are under age 55 you get \$1.00 insurance for each \$1.00 you deposit up to a maximum of \$2,000. After age 55 the amount of coverage is reduced on a graduated scale until age 70. You do not lose any part of your insurance on reaching age 55. If you deposit \$2,000 by age 54, for example, your family gets \$2,000 insurance in addition to your deposit even if you die at 100. The reduced scale only applies to deposits made after age 54.

Where else can you get insurance without cost? And as a further inducement your savings are increased by dividend payments at the close of each year. Last year your Credit Union paid a 5% dividend.

Contact Your Region Four Credit Union NOW, Tomorrow May Be Too Late.

CAA Region Four Federal Credit Union
5651 W. Manchester Avenue
Los Angeles 45, California

_____ I desire to become a member of the Credit Union. Please send me membership signature card and additional information.

_____ Also, I wish to apply for a loan of \$ _____ to be repaid in _____ monthly payments.

Name: _____

Address: _____

NOTE: An employee with less than one year of CAA employment may borrow to a maximum of \$150.00 on his signature alone. After one year of employment, signature loans to a maximum of \$400.00 may be approved. Higher loans are available to all employees, providing adequate collateral is furnished, in the form of automobile titles, credit union shares, co-signers, or other acceptable collateral.