REGION 4 NEWS

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WHAT HAPPENED TO GRANDMA'S HELICOPTER

By

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Chief, Manufacturing Inspection Branch

In early 1942, you could look into the not too distant future and see Grandma loading the Grandchildren into the family helicopter and soaring off to the candy store. A war and several other things got in the way. So far, Grandma has had to limp along in the family hot-rod, unable to get more than two wheels off the ground at a time.

The event in 1942 that caused adventure-minded Grandma's to dream of owning their own helicopter was the public demonstration of a new kind of flying machine designated the "VS-300" by its illustrious designer, Igor Sikorsky. After more than thirty years of tireless effort and devotion to an idea, Sikorsky gave to the world a new concept of mechanical mobility and opened the door to new and startling aviation developments. His VS-300 was the most fantastically versatile flying machine ever developed. Published pictures of the VS-300 landing among parked automobiles on a parking lot occasioned predictions for the helicopter that have since proved to be slightly over-optimistic.

It was claimed that the helicopter had the essential attributes of an aircraft, that it could be used by hundreds of thousands of men and women, old and young, that it would be simple to operate and service, that if produced by the hundreds of thousands it would cost about as much as a medium-priced automobile, and that it would not cost much to maintain. One conservative national magazine forecast the post-war helicopter price at $2,000 or a little less. Cost of servicing would be no more, certainly, and perhaps less than your car. Learning to fly a helicopter would be no more difficult than learning to drive an automobile. Men and women with middle-age reflexes would be just as safe in one as the other. Hundreds of thousands, perhaps millions, of helicopters would be flying in all directions at once.

One article related how in 1955 your wife would handle a typical family helicopter as she flew fifty miles to spend an hour with a friend. It told how she would take it out of the helicopter hangar that would be only slightly larger than your two-car

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garage. She would drive it out of the garage to a suitable space near the badminton court for take-off. The article went on to describe the controls. They were the same as the ones on the VS-300 and basically the same as used today on nearly all helicopters. The prediction did not envision a marked simplication of controls or control procedures. After describing this fancied flight on through to where your wife "climbs briskly out," the question is then asked, "Does this sound complicated?" As described, it did not. But if the same story were written in light of present knowledge, it would sound very complicated indeed. You would not be overly enthusiastic about the Mrs. making the trip unless she had considerable experience in flying. The published claims were based on a time prediction of 1955.

Unfortunately, such predictions were not realized and eventually tended to discredit the helicopter and dampen public enthusiasm. This kind of visionary publicity did very little to build permanent public interest in a mode of transportation that is destined to play a big part in our lives and especially in the lives of our children. Helicopters have already received too much unrealistic and premature publicity. What is needed now is a little sober and realistic evaluation.

When the helicopter first became a successful reality, it was visioned as a small family type craft that overcame the limitations of the airplane. Not as fast as the airplane perhaps, but capable of operation direct from one's residence. Experience, mostly at the expense of the Armed Forces, has shown the helicopter to be better adaptable to large short haul weight carriers and rescue work. Its main civilian uses have proved to be commercial operations such as crop-dusting, spraying, pipeline patrols, and short-haul metropolitan air lines. Except for publicity purposes, very few helicopters have been used for strictly personal transportation.

But don't get the wrong impression. The helicopter has a wonderful future and your wife may yet use her own helicopter to visit Aunt Emma or do the grocery shopping. The 1955 date was just a little too optimistic.

To understand why Grandma isn't bumping rotor blades with the homecoming traffic, you must understand the helicopter and its limitations. The helicopters of today, except for power and size, are not very different from the first successful Sikorsky. Not very different, that is, as far as controllability and stability are concerned, and that is where improvement must be made if you are going to use one for commuting.

To build a gasoline-powered device that would lift itself and its operator vertically was possible long before a helicopter was flown and considered a success. The real difficulty was controllability. Sikorsky's outstanding contribution was the development of a satisfactory control system.

Unlike surface transportation, flying machines are required to maneuver in more than one direction. In addition to being controllable in a horizontal direction, that is to right or left, it must also be controllable in the vertical direction, up or down. Surface transportation, with a few exceptions, depends on the earth's surface to remain upright. Aircraft on the other hand, must possess a special control for this purpose. Therefore, while an automobile driver has to control speed and direction, a pilot must in addition be prepared to alter his course in two directions and at the same time remain level.

At first thought it might appear that the airplane pilot's job is very complicated in comparison to an automobile driver's. This may well be, but if we discount transitional

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periods where the airplane changes from a ground vehicle to an airborne vehicle and vice versa, and for the moment, remove the hazards of weather and navigation and compare clear weather cruise flight to that of driving an automobile down a smooth highway, the degree of alertness required of a pilot is considerably less. This is true because changes in forward cruising speed are not necessary or even desirable, and a modern airplane certificated as airworthy by the Civil Aeronautics Administration must possess what is generally referred to as inherent aerodynamic stability. Roughly this means that if all human control is removed from the airplane, it will continue to maintain its correct position. Actually it means even more. If a gust displaces the airplane from its proper position, it will tend to return to its original position without aid from the pilot. It is not suggested that the pilot take the day off, but there are several accounts on record of airplanes making inadvertent but entirely successful flights, including take-off and landing, and covering many miles without benefit of either human or mechanical pilot.

A small personal type airplane in flight in good weather is easier to fly than an automobile is to drive, but during take-off and landing alert and accurate control is necessary because the take-off and landing must be made at relatively high speeds. If an airplane is difficult to fly due to the high forward speed required during take-off and landing and if you reduce the forward speed to zero during these periods, then it follows that such an airplane would be very easy to fly.

The helicopter is such an aircraft. It can take-off and land at zero forward speed. Therefore, it might appear that the helicopter had overcome the most difficult stages of flying and, therefore, should be the easiest of aircraft to fly. Surprisingly enough this is not true of today's helicopters.

Helicopters differ in some respects from fixed-wing aircraft other than in looks and utility. The most regrettable difference is lack of inherent stability. You should not view this with too much concern for the future. Early airplanes left much to be desired in this respect. Instability is, however, a deterent to mass use of helicopters by the general public. If instability was the only thing to keep helicopters out of the home garage, some solution would be found and soon.

Coupled with lack of stability is the difficulty of control. A description of the controls and how they are used should help to illustrate this point. There is a lever located along the left side of the pilot that will increase and decrease lift when moved up and down. This is called the collective pitch control. On the end of this lever is a throttle grip not unlike the throttle grip on a motorcycle handle-bar. There is also a control called the cyclic pitch control which is operated from the cockpit by a vertical lever much like the control stick of a light airplane. But unlike an airplane, moving this control in any direction will cause the helicopter to move in that direction. The helicopter actually tilts over and moves in that direction. This control is also used to maintain level flight and bank the machine on turns. Directional control is maintained by rudder pedals like an airplane but the pedals in addition are used to keep the helicopter from turning on its axis from the effects of the engine torque exerted on the main rotor.

Now try flying this ugly duckling that is just as complicated as it sounds. Starting with the engine all warmed up and ready for flight, slowly lift the collective pitch lever with your left hand. This lever is also connected to the engine throttle and will increase the power. However, because the power required for different settings of collective pitch is not always the same for all flight conditions, it will

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also be necessary to rotate the throttle grip to obtain the right power. As the power and collective pitch are increased, you will have to move the rudder pedals with your feet to offset the increased torque. Remember each of these unrelated movements must be made carefully and in precise coordination. In addition, the control stick must be moved with your right hand constantly to remain level. As you leave the ground, each of the following controls must be moved continually and in coordination: "collective" up and down, throttle rotated on the end of the collective pitch control, rudder pedals to hold the desired direction, and constantly moving the stick fore and aft and from side to side. Even if the wind was not blowing when you started the engine, you now find yourself in the center of a small tornado. If you think patting your head and rubbing your stomach is difficult, try flying a helicopter.

Now hovering a few feet above the ground, the next thing to do is get started forward. That should be easy. Just push the stick forward. Sorry, it's not that simple. Helicopters need less power when flying forward than when hovering. You will have to reduce power and also adjust the rudder pedals to accommodate the reduced torque. Also, keep moving the stick to remain level. It's about like balancing yourself on a ball.

We could go on through all the maneuvers of flight, including the landing, and what to do if the engine stops, but this much should serve to illustrate the point that it is a little more difficult to learn to fly a helicopter than it is to learn to drive an automobile. And remember, you can't slam on the brakes and stop if you "goof."

And again, instability and difficulty of control are not the only things that make helicopters very scare on used-car lots. In spite of predictions that the post-war machine would cost about $2,000 or even a little less, the price is not nearly that low. There are two very popular three-place machines on the market and available to civilians. Both are priced at around $35,000. This price, no doubt, sounds completely out of reason, but here is a little-known fact. Three million dollars was spent on the development of one of these and the total production to date, including 125 exports, is approximately 600. If you divide three million dollars by 600, you find that someone is going to have to pay $5,000 on each machine just to cover development costs alone. Low unit volume also adds to production costs. If automobiles were produced in small quantities they would cost several times what they do.

Further, helicopters are not inexpensive to operate. Records kept by competent operators show a direct cost of about $10 per hour. With a 65 MPH average speed, this comes out to about $6\frac{1}{2}¢$ per mile. In comparison, direct cost of operation of your car is probably about 2 or 3 cents per mile. Actually, helicopter operating cost is even higher than $10 per hour because direct cost does not include such items as interest on investment and depreciation.

There are reasons for the high cost of operating a helicopter. The mechanism that keeps a helicopter clattering through the air is really very complicated. In order to save weight, many parts are operating near their maximum mechanical limits. Any appreciable wear may be cause for replacement. Aircraft for safety's sake must be kept in better repair generally than land vehicles.

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District Offices in Region 4, have been or will be visited: Phoenix, Burbank, Los Angeles, San Francisco, Palo Alto, Denver and Cheyenne.

Based on their findings, CAA expects to have a new set of classification guidelines for grading these jobs. It has been recognized that the present "numbers racket" standards are out of date. It is fairly safe to say that the numbers criteria will certainly not continue to govern in the manner that they now do. Action along this line is quite time-consuming. Don't look for any tangible results next pay day.

Why are People Resigning?

This is a real good question and the Personnel Office is anxious to develop more concrete information than they have had. As a means of determining the exact reasons, the SF-52 has been over-imprinted with about 15 basic reasons why people resign. In the future, employees will be expected to indicate those factors which apply to their particular situation. Supervisors will be requested to conduct an exit interview to determine whether or not other factors may have also prompted the person to look elsewhere.

BRAINSTORM PAYOFFS

Group "brainstorming" is enjoying a current surge of deserved popularity. As most people know by now, this is a technique for releasing our creative thinking. It pays off.

So does "individual brainstorming" as practiced by our employees who make suggestions for the improvement of our operations. The following have had their ideas adopted and have qualified for awards:

Betty Anderson	Budget & Finance Div.	$20.00
Robert Denzer	Airports Div.	15.00
Beverly C. De Lancey	Facilities Div.	10.00
Gloria Kranzer	Regional Attorney	15.00
Laurence C. Jones	Airways Operations (Ogden)	10.00
Edward S. Leach	General Safety (Seattle)	50.00
Jeanne M. Mallory	Facilities (Seattle)	10.00
S. Lillian Pittman	Facilities Div.	10.00
Herschel L. Price	Airways Operations (Seattle)	100.00
Howard S. Pyle	Facilities Div. (Field)	10.00
Joseph M. Shukal	Facilities Div.	10.00
Karl E. Warren	Facilities Div.	50.00

This is a good place to point out a fact which is not too well understood. The amount of an award is not always indicative of the quality of a suggestion. For example, an idea which qualifies for only $10.00 may be just as good -- as a piece of constructive thinking -- as one which rates $75.00. In other words, it may reflect just as much ingenuity and just as good thinking quality. The award amount depends on the EXTENT OF APPLICATION and the nature of the benefits (tangible and intangible).

Most of the above awards are the full amounts which the suggester will receive. Where there is any chance of a wider application than has already been explored, the

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Incentive Awards Program Officer continues to refer the idea for possible additional adoptions. In each case of that type, however, the suggester is informed of the further possibilities of his idea.

For some of these winners this will be their first notification of their awards. The individual notices - and the checks - will be on their way shortly.

OPERATION PAPERWORK PRIZE

Operation Paperwork was a notable success. It produced 84 suggestions and at least that many more work improvement ideas which were not eligible as formal suggestions. Moreover, it stirred up a great deal of constructive thinking at all levels on how to simplify or otherwise improve our paperwork.

The Region was authorized to present an additional $50 award for the best of these suggestions ADOPTED BY DECEMBER 1. The choice was a difficult one for the Committee to make. Some delay was caused, too, by our request that the "adopted by December" qualification be extended to January 31. This would have given those which had to be referred to Washington a better chance. This extension of time could not be approved.

The choice narrowed down to eight, and then finally to two: One by Beverly De Lancey, Secretary in Facilities, and one by Gloria Kranzer, Secretary to the Deputy Regional Attorney. Then it became really tough for the Incentive Awards Committee to decide which was better. The Committee reached a stalemate and ultimately decided on what seemed to them the only fair solution: The $50 award was split, $25 going to Beverly De Lancey and $25 to Gloria Kranzer.

Our congratulations go to the winners. And the thanks of the Region go to all who participated in this improvement of our operations.

ORCHIDS

At an annual awards banquet held on January 18, 1957, at the Jackson Hotel, Medford, Oregon, Grant C. Bourquin, Chief Medford Control Tower, was presented the Medford Safety Council's award for exceptional achievement in safety by an individual. The award came as a complete surprise to Mr. Bourquin.

Bourquin has been Chief of the control tower at the airport 15 years, in which time there has never been a chargeable accident recorded. Last year the control tower trafficked 55,000 planes in and out of the airport.

We wish to add our congratulations for a job well done!

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RETIREMENTS

Father Time has influenced two of our ole' timers to put on their Retirement Clothes. The latest graduates are Chester P. Maddox and Leslie P. Rose of the Facilities Division. Both of them go back to the "Knee-Britches" era of our Federal Airways System.

Maddox, Supervisory Airways Specialist, retired on January 31, after 37 years of government service. Chet served in the Armed Services both Army and Naval Aviation from 1918 to 1927. Upon termination of his service in Naval Aviation and a short interim period, he entered on duty July 21, 1928, as an Airways Mechanician in the Airways Division of the Lighthouse Service, Seventeenth District.

His first assignment with the Airways Division was during the construction and commissioning of the Sac-Reno section of the San Francisco-Salt Lake Airway. Unitl 1946 he served in various positions on many sections of Airways in the old Sixth Airways District and Region. Since 1947 he has been assigned as Airways District Supervisor and Supervisory Airways Specialist in the San Francisco Bay Area and southern area of the Region.

Chet has traveled almost continually for the past several years and no doubt he and Mrs. Maddox will continue their wanderings with retirement and visit their many friends in the (Airways Systems) CAA. The best of luck, Chet.

L. P. Rose, Electro-Mechanical Technician, WS-17, at Santa Barbara since October 1944, also retired on January 31.

He was in the Air Mail Service, Post Office Department, Omaha from 1925 to 1927. He then began work in Airways, June 1928, under the former Salt Lake Office of Lighthouse Service, Airways Division, on installation and modernization work in Nebraska and Wyoming. In March 1929 he was appointed Airways Mechanician, Salt Lake City -- Salt Lake-Strevell section of SL-Pendleton Airways. In October 1944 he transferred to Santa Barbara where he owns his home. Good luck, L.P.

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The Civil Aeronautics Administration wishes it had more "don muang" in this country. "Don muang" in Thailand means -- approximately -- "useless ground". Ground is considered "useless" there when it is high ground because water will not flow into it, and therefore rice cannot be grown on it. The International Airport at Bangkok, for example, is called the Don Muang Airport. CAA officials say they could really produce an "adequate national airport system" in jig time if they had more don muang.

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The Regional Office was pleased to receive the following commendation from the California Aeronautics Commission:

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State of California

California Aeronautics Commission

CERTIFICATE OF COMMENDATION

Whereas, Civil Aeronautics Administration personnel, namely

William E. Owens	Stanley S. Williams
Harry B. Witter	Thurber Thompson
Sylvia Gardner	Edward J. Sullivan
Harold L. Cobb	Arnold Hirt
	Clayton Hackett

demonstrated cooperation, dependability and devotion of an unusual degree during California's tragic flood in the Marysville and Yuba City areas, and

Whereas, their untiring efforts were given on their own time and beyond the call of duty to the benefit of fellow man,

Now, therefore, be it resolved, that the California Aeronautics Commission in behalf of the people of the State of California, officially commend the above personnel of CAA for their outstanding contributions to the life and safety of the Yuba City and Marysville victims during the December, 1955, flood disaster.

/s/ LeRoy Lampson
Chairman, California Aeronautics Commission

/s/ Clyde P. Barnett
Director, California Aeronautics Commission

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We add our congratulations to these personnel of the Marysville and Sacramento facilities on the above occasion. Copies of the certificate award will be placed in the personnel file of each of the employees named.

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Safety first, efficiency next, and convenience third is the way the Civil Aeronautics Administration, U. S. Department of Commerce, weighs requests for federal aid in the building or improving of airports. Since start of the Federal Aid Airport Program in 1946, the CAA has helped local sponsors with 3,132 projects on 1,317 airports and has spent about $325,000,000. In seven previous federal aid programs, extending back beyond World War II, the federal funds totalled $796,000,000.

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DIVISION HIGHLIGHTS

AIRCRAFT ENGINEERING DIVISION

The Final Type Certification Board meeting on the Aerocar Model I was held and, on December 13, 1956, Type Certificate No. 4A16 was issued on this model.

Assembly work is under way on three Queen Bee airplanes being manufactured by Bee Aviation, Inc. in San Diego. Technical data pertaining to this model have not yet been received except for the Application for Type Certificate. The airplane is reported to be a 4-place, low wing, monoplane with a "V" tail and retractable landing gear. It is powered by a single Lycoming O-360-A1A engine.

Evaluation of the basic loads on the Boeing Model 707 is proceeding normally. Numerous engineering matters are being studied and evaluated, including such items as slowdown characteristics, speed spreads, and the various "special condition" items supplied to Boeing. Some of these items are becoming quite controversial and meetings are scheduled in Washington in the immediate future between Boeing, Region IV, and Washington personnel to attempt to resolve some of them. Fabrication of the first 707 aircraft is progressing rapidly. The cockpit enclosure and lower nose section, including the wheel well assembly, have been completed. The inboard wings and wing spars are in jigs and are being assembled. Boeing has changed the production schedule for this airplane by advancing its completion date approximately two months. The first article now is No. 15 in the production line. It appears that subcontracted component delivery schedules may be the limiting factors controlling the assembly schedule. Meetings have been held with Boeing quality control personnel to correct the many discrepancies which are being found in technical data released to production.

The evaluation of solid aluminum propeller blades on the Boeing Model 377 aircraft, as submitted by Pan American, now is proceeding rapidly. Approval information regarding the increased ratings for the engine, the increased kinetic energy capacity for the brakes, and the propeller vibration characteristics have just been received permitting the rapid completion of this project.

Engineering work on the Convair Model 22 is progressing rapidly at Convair; however, relatively few data are being received regarding this project. Convair are considering the use of chemical milling in the fabrication of this model. The procedure would consist of dipping the material to be finished in a caustic solution which would result in the chemical milling of material at the rate of one mil per minute. This procedure is presently being used in the Military F-102B airplane and Convair proposes to use it initially in fabricating the leading edge wing skin for the Model 22. Numerous test samples have been examined and it appears that the smoothness of the milling achieved by chemical milling is comparable to that resulting from machine milling.

Convair has completed tests substantiating the Westinghouse decelostat installation for the maximum certificated gross weight of the Model 440 airplane with either the 1400 psi or 1700 psi hydraulic system. This makes the decelostat installation available for either of the brake configurations approved for the Model 440 airplanes and on Model 340 airplanes modified to the 440 configuration.

Evaluation of basic loads on the Douglas Model DC-8 is continuing. Miscellaneous powerplant tests are under way, including the evaluation of fire resistance and

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fireproof qualities of fuel flowmeters, fittings, and hoses. A meeting is scheduled with Douglas engineers in January for the purpose of evaluating their program to substantiate this model for fatigue and/or "fail-safe". Washington personnel are scheduled to participate in this meeting.

The Type Inspection Report covering the test run on the Herrmann X-375 helicopter engine has been completed and forwarded to Washington. A detailed metallurgical examination was made of the spalled area of the main cam of this engine. The examination revealed that there were definite signs of localized segregation in the steel in the vicinity of the spalled area. Cracks developed along these segregations which appeared to be the result of incomplete alloying. The material specified for this cam was Timken 3312 bearing steel; however, the cam was forged during the Korean war and was made from a 9300 series steel which was a lower quality, emergency substitute for 3312 steel bar. With the exception of the spalled area, the cam track is considered to be in perfect condition.

The Ben Howard & Associates "maximizer kit" for DC-3 aircraft, which is being merchandised through AiResearch, is being processed for approval on the basis of several Supplemental Type Certificates. The powerplant portions of this kit have been flight tested and approved for use on the 1830-92 engines only. Further tests are scheduled to be run on a similar kit installed on the -94 engines. The Supplemental Type Certificate covering the landing gear doors and fairing still is in process of design and evaluation.

Lockheed Pre-certification flight tests on their Model 1649A airplane have passed the 100 hour mark. The Pre-Flight Type Certification Board is scheduled for January 11th. Engineering personnel are rapidly finalizing the various phases of this project in order to expedite the issuance of the Type Inspection Authorization. CAA flight test personnel have been working closely with Lockheed on all phases of the proposed type certification flight test program. It is expected that a considerable portion of this program will be conducted at Edwards Air Force Base starting about the middle of January.

Engineering work and "fail safe" tests on the Lockheed Model 188 are continuing. A conference to review the over-all "fail-safe" program is scheduled between Lockheed Washington, and Region IV personnel in January. Miscellaneous controversial items such as emergency exit configurations and slowdown characteristics are being worked on. The assembly of the prototype airplane is scheduled to begin late in January.

Recent ground tests on the Monte-Copter pressure jet helicopter have revealed difficulties in the compressor design. Preliminary indications are that the compressor being tested is not large enough to absorb the engine power, and it appears Monte-Copter will have to design a new compressor.

Engineering work on the North American NA-246 twin-jet transport airplane is in process. Several powerplant design items have been evaluated and commented upon. The Preliminary Type Certification Board meeting is scheduled for January 22nd. The agenda for this meeting has been prepared and presently is being co-ordinated preparatory for transmittal to North American.

Several inquiries have been received regarding the Johnson Rocket 185 airplane. This airplane is covered by Type Certificate No. 776 which is held by Mr. J. C. Pirtle.

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Several attempts have been made to locate the holder of the type certificate without success in order to obtain his permission to release technical data pertaining to this project for use by owners of such aircraft. It appears that it is in the public interest to release the data even though attempts to locate Mr. Pirtle have been unsuccessful and action is under way to accomplish this.

The Silvaire Company located at Fort Collins, Colorado, has been reorganized to expand their operating capital. Their manufacturing facilities have been moved to a new building and their offices have been moved to a downtown office building. ASDO-47 will continue in its present location in spite of this move.

The Forney Aircraft Company is producing aircraft at the rate of approximately one per week; however, the certification rate has lagged behind production because of the lack of engines.

The Flight Engineer's International Association has contacted this Region requesting that a meeting be scheduled with Type Certification Board personnel handling turbine-powered aircraft approvals to discuss items of mutual interest. Arrangements have been made for this meeting to be held in Los Angeles on January 29th.

AIR CARRIER SAFETY DIVISION

American Airlines' new $4,000,000 hangar at the Los Angeles International Airport is completed and was occupied on December 19, 1956. The project includes two 200,000 gallon water storage tanks to furnish fire protection and six underground tanks to hold 330,000 gallons of aviation and automotive gasoline. An adjacent parking lot provides for 550 automobiles.

The AAL hangar has 200,000 square feet of floor space which provides ten all-weather working stations for aircraft. A novel feature of the doors is adjustable openings which may be changed to fit around fuselage and provide a weathertight enclosure although the tail of the airplane is outside the hangar. These and other details of the building have been planned to provide for future jet airliners.

Los Angeles Air Service made twelve round-trips to Europe on the Hungarian Refugee airlift, utilizing two DC-4s. The first four trips were made under the auspices of the Intergovernmental Committee for European Migration (ICEM). The last eight trips were made under contract to MATS on Operations Safe Haven. The Hungarian refugees were flown from Europe to McGuire Air Force Base, New Jersey, and from there were taken to Camp Kilmer, New Jersey.

Slick Airways' plans to move the company's administrative office and main base of operations from Burbank to Dallas, Texas, have progressed according to schedule. Effective date of the transfer will be January 7, 1957.

The Flying Tiger Line, Inc., continued an extensive international operations program in addition to heavy seasonal freight traffic domestically. Hungarian refugees were transported from Vienna to Auckland, New Zealand; Johannesburg, South Africa; Canada, and the United States. Thirty round trips, carrying military personnel between Tokyo, Okinawa, Formosa and Manila were also completed during the month.

Pacific Southwest Airlines broke its previous record for passengers carried in a twenty-four hour period this month. (Continued on next page)

Trans Continental Airlines has operated three DC-4s over the North Atlantic during most of December in addition to normal domestic transcontinental flights.

Trans American Airlines received delivery of a new DC6B this month. They, too, are participating in the Hungarian refugee movement between Europe and the United States.

Central Air Transport is also engaged in the Hungarian refugee operation, as well as in domestic CAM flights.

Rick Helicopters are presently operating a Helicopter Air Taxi Service from San Francisco International Airport to anywhere in the Bay Area. Majority of flights are from San Francisco Airport to downtown San Francisco or to Oakland Airport. A three-place Bell helicopter is utilized.

Southwest Airways held two pilot safety training meetings during December. These were on the 18th and 20th and were attended by Messrs. Blanchard, representing LA-220, and James F. Rudolph, Inspector-in-Charge, Southwest Airways.

Considerable time was devoted by San Francisco ACDO to inspection of records and airmen of World Airways who left with crews and two DC-4 type aircraft to commence a six-month military contract operating between Tokyo and Manila via Okinawa and Taipeh, Formosa. Their temporary operating headquarters will be in Tokyo, Japan.

California Eastern Aviation, World Airways and Central Air Transport operated several trips on the Hungarian Air Lift from Austria to McGuire Air Force Base.

In order to expedite the loading, unloading and delivering of baggage, United Air Lines has under consideration the purchase of 60 cubic foot preloaded baggage containers that can be hoisted into the cargo pits. It is proposed that these containers will be used in conjunction with their DC-8 jet operation.

United Air Lines will start construction in January 1957 on a second floor expansion over the San Francisco Power Plant overhaul shop. This new addition is expected to be completed about August 1, 1957 and will give the operator a total area of over 1,000,000 square feet at their maintenance base.

During December Captain Carlos Arroyo, Chilean Air Force Officer, assigned to the United States for training preparatory to assignment to a high operations position in the Chilean equivalent of the Civil Aeronautics Administration, was the guest of the Denver ASDO. Captain Arroyo showed intense interest in all phases of airline operations and maintenance and received a thorough knowledge of the internal workings of the airlines headquartered in Denver, as well as the role played by the various segments of Denver based CAA.

Central Airlines inaugurated service into Denver early in the month; inspectors of this office monitored same.

Twenty-six Continental Air Lines pilots and co-pilots received United Air Lines DC-7 ground school course during the month preparatory to flight training in DC-6 and transition training in DC-7 aircraft by Continental.

An anonymous phone call to MKC Continental Air Lines office, apparently by a "crank", during the evening of December 30, seriously inconvenienced passengers of five CAL

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flights, three of which were en route and two in preparation. The "crank" stated a bomb was aboard one of the flights; the three flights which were en route made unscheduled landings short of their destinations for complete unloading and search; the two flights preparing for departure were delayed. The prescribed procedures for notification of the FBI, etc., were promptly executed by inspectors of this office.

Alaska Airlines has moved into new facilities at Paine Field, Everett, Washington, consisting of a wooden arch type hangar 200' X 220' plus a connecting building 110' X 145' to house the engine overhaul shop and storeroom. The general offices are also attached to the hangar in a building 40' X 184'. Agents from the Seattle office have been coordinating with the management of Alaska Airlines and have completed the inspection for their repair station the latter part of December.

The second Boeing KC-135 was test flown on December 18. The third aircraft has left the plant and is now on the pre-flight line with an early test flight anticipated. No. 4 KC-135 is nearly ready to leave the production line and No. 10 KC-135 is taking very definite shape on the production line. The first 707 commercial aircraft will be No. 15 instead of No. 22 as earlier estimated and parts for this aircraft are now in the jigs and undergoing factory inspection. This stepped up schedule will probably affect all air carrier offices interested in jet transports in the near future.

This office has initiated an evaluation of air traffic problems in the Seattle area. On December 12 CAA personnel directly concerned with the problems of air traffic safety met to discuss this matter. Evaluation of the Seattle Terminal area was taken into consideration. The Seattle-Tacoma Airport with its heavy airline operation, Renton Airport which is producing KC-135 and 707 jet aircraft, and Boeing Field with its Boeing Flight Test Section and B-52 production schedule are being studied. Renton Airport and Boeing Field also handle a great many small aircraft and a mixing of this variety of aircraft traffic patterns are items that are being considered by all branches of the CAA in the Seattle area.

About 40 officials of the 11 Boeing model 707 customer airlines were in Seattle the week of December 3 - 7 for a series of jet transport standardization meetings with Boeing Transport Division officials. The purpose of the three day conference is to seek customer agreement on standardization of the various systems being installed on Boeing jet stratoliners.

An airline terminal building with about 3000 square feet area is being completed at Paine Field near Everett, Washington, to handle airline passengers during periods of inclement weather at the regular airline terminals in the Seattle area. Paine Field has been used by nearly every airline operating into Seattle at some time during the last two months and the facilities for passenger comfort were extremely limited during these operations so this is a welcome addition to the Seattle terminal area. The 7300 foot runway at Paine Field is to be extended to 9000 feet during 1957.

GENERAL SAFETY DIVISION

The Palo Alto District Office recommended certification for its first helicopter air taxi operating certificate. The same concern, Rick Helicopters, has recently been certificated an approved flight training agency and our Maintenance Agent is now conducting inspections relative to certificating it as an approved repair station. In connection with Rick's air taxi operations a meeting was held with their personnel

(Continued on next page)

and CAA representatives from this office, the Oakland office, and San Francisco ACDO relative to weather minimums for helicopters.

The Air ROTC training programs at Stanford and Santa Clara Universities are rounding more into shape. Contracts have been let by both these institutions to flight operators, final approval of which rests with the Air Force and Army. Actual flight training is expected to start later this month.

Agent Ruggenberg, of the Portland district office, gave a lecture on aircraft accidents and accident prevention to 37 cadets and 16 senior members of the Vancouver C.A.P. Squadron.

Columbia Aviation Country Club's Air Tour Committee has made final arrangements for a tour next month which will take them to Miami, Florida. From there they will take a ten day boat trip to Haiti, Jamaica, and return. The group will be smaller than their previous tours consisting of 18 airplanes and 56 people.

It is expected that the ROTC flight training program will commence at Oregon State College some time in January.

Contacts have been made with our Reno office by the Manager of a proposed helicopter operation in the area. At present it appears that the operator plans to use the Reno Municipal Airport as a base with operations proposed between this base and the various ski areas of Nevada and eastern California.

The Billings, Montana ASDO says: We have carefully checked our records and during the last quarter it appears that this District has a record of not having a single accident, even of a minor nature. This is a remarkable record in our eyes, since this particular quarter is the period of the year when our weather changes from summer to winter and usually during this change of season we have several accidents of minor nature.

During the month of December the Montana Pilots' Hangar in Billings, Montana, had two breakfast flights - one to Lewistown, Montana; and one to Hardin, Montana.

Agent Doster made a talk to the December meeting of the Montana Chapter of 99's. This talk was based on the speech given by Mr. Pyle entitled, "Safety in General Aviation."

A new 80 x 120' hangar has been erected on the Billings Airport and another new hangar will be completed on the airport during the month of January.

More hangar space will soon be available on Stapleton Airfield, Denver. This will help house some of the executive aircraft now standing outside.

Columbia Pictures spent one day at the Long Beach Airport shooting the picture which is to star Richard Conte. Interference with normal operations was kept to a minimum.

The bad weather reported in November by the Medford ASDO, continued through the month of December, only worse -- 23 foggy days having been reported locally. There has been little precipitation, however, and the dry fall has now caused some concern because of the light snow pack in the mountains which could result in a shortage of irrigation water next season. (Continued on next page)

The Associated Glider Clubs of Southern California, Ltd., and their co-sponsor, the San Diego Junior Chamber of Commerce, have received a firm commitment from the City of San Diego, which will permit the holding of the Eleventh Annual Pacific Coast Mid-Winter Soaring Championships at Torrey Pines Gliderport late in February.

The new airport near San Diego, which has apparently been constructed on the north shore of Mission Bay, is a movie set for the filming of "Pylon" by Universal Studios. A runway is being graded and watered on the sand bar, a very excellent hangar has been erected, and grandstand and pylons have been built. Supervision of the safety aspects of the necessary flying from this location will be given by the San Diego office, including placing of the pylons and preliminary flying of the course.

Flight and maintenance activity at the Van Nuys ASDO during December maintained the upswing which has been apparent throughout 1956. Comparing the figures of this month's report against those of last year, we find both private and student pilot certificates up almost 70%.

Agents Buck and Nacht are working on the certification of a PBY-5A in the restricted category which will be equipped for under water oil exploration; this includes a 250 lb. cylinder which will be lowered by winch from the aircraft into the water. A major point of interest here is whether the plane will go down to meet the cylinder (and provide the pilots a first hand view of the exploration field) if the cylinder becomes fouled or stuck in the mud and the winch malfunctions.

We have been advised by the Yakima district office that the contract for ROTC flight training at Central Washington College of Education, Ellensburg, Washington, has been awarded to Midstate Aviation Ellensburg. The first class consisting of eight students is scheduled to start February 1st. Eighteen students will participate during the second quarter, and 35 to 40 each quarter thereafter.

AIRPORTS DIVISION

Grant Offers were issued during the month to the following: Kingman, Arizona, $19,823 for terminal building; Oak Creek (Sedona), Arizona, $13,420 for construction of landing strip and access road; Ontario, California $89,891 for land acquisition and construction of sanitary sewer and storm drain.

The Annual Report to Congress of operations under the Federal Airport Act for the 1956 Fiscal Year was received this month from the Washington Office. From information abstracted from the report, it was interesting to note that out of a total of 111 Grant Agreements totaling $17,871,069 issued by the continental regions, Region 4 issued 47 totaling $8,600,613. This represents 42% by number and 48% by funds.

Project Applications were received from the following locations: Wolf Point, Montana, $45,671 for land acquisition and grade, drain and pave runway, taxiway and apron; Blanding, Utah, $37,569 for land acquisition and construction of landing strip, taxiway and apron; Spanish Fork-Springville, Utah, $25,792 acquire clear zones, pave runway, construct terminal building and remove obstructions; Boeing Field (Seattle), Washington, $363,592 acquisition of clear zones; Omak, Washington, $9,638 for runway lighting, beacon and wind cone.

The Regional Grant Review Committee approved final payments on Orange County (Santa Ana) California, Project -5602; Farmington, New Mexico, Project -0604; and Salt Lake City, Utah, Project -5709. In addition, progress payments were issued on 11 projects totaling $570,329. (Highlights continued next page)

AIR NAVIGATION FACILITIES DIVISION

Mr. Mackie attended a quarterly ANF Division Chiefs Conference in Washington, D. C. January 28 through 30.

Program Engineering Branch

Bob Frehse is now at the Aeronautical Center attending the Short Course in Air Traffic Control.

Electronics Engineering Branch

Erwin Clark and A.C. Beard completed the VOR site surveys at Chinle and Congress Junction. Their next survey is near Rice after which they will head for central and northern Nevada.

Emmett Whitney and his crew, consisting of Bob Crookshank, Lonnie Tarver, Bill Keller, Nick Smokey, and Will Zeigner completed the San Jose TVOR. Bob Crookshank is now heading up a crew consisting of Bill Keller, Roger Baker, Al Calloway and Hal Fontecilla, and this crew is busily engaged in installing electronic equipment at the Casa Grande VOR. Will Zeigner has returned to school. Lonnie Tarver is joining the VOR Improvement crew at Corona.

Boyd Preece and his crew, consisting of Bob Stevenson, Glenn Shoop and Ed Jansen, completed the VOR Improvement at Twin Falls. He is now headed for Truth or Consequences to modernize the VOR with a new crew consisting of Nick Smokey, Ed Jansen and Bob Stevenson.

Glenn Shoop and Lonnie Tarver, are modernizing the Corona VOR.
Phil Nicoletti and Jim Barnes, are completing the Winslow VOR Modernization. The other two members of this crew, Bob Betz and Ray Dickenson, are now at Mormon Mesa where they are starting modernization of that VOR.

The RCA crew, consisting of David Young, Don Gross and Eugene Mallory, completed and commissioned the El Centro VOR. Their next assignment is modernization of the Grants VOR.

Emmett Whitney will keep tabs on several VOR establishment crews during the coming months. His immediate projects are general supervision of the electronic installation of the Casa Grande and Deming VOR's.

Mike Domitrovich is winding up some ATCS work for the Communication Station at Lewistown. We expect his next assignment will be general supervision of the VOR Improvement projects now taking place.

Jerry Gallaugher assisted by Marvin Andelin and Robert Bynum are engaged in installing equipment in the first of the four new VOR Test Vans.

Frank Beauchamp, Hank Scribner and Ken Van Dyke are conducting an ILS Localizer survey at Long Beach.

Darol Hafner and Clyde Harrell installed the visual coordinating system in the Portland Tower. They also performed modifications to the aural coordinating system.

The installation of the ASR-3 repeater at Long Beach has been completed and the facility was commissioned January 16, 1957. (Continued on next page)

Norman Carlberg has departed for Washington, D. C. to study the techniques involved in the installation of circular polarization equipment on the ASR radar at the Washington Airport. From Washington, he will proceed to Philadelphia where he will study the manufacture of this equipment at the I.T.E. Manufacturing Company for approximately two weeks.

Bob Faul is at San Francisco in connection with the lowering of the ASR tower. While at San Francisco, he will also install a visual coordinating system in the tower cab.

Wayne Brown has been searching for peripheral sites in the Boise and Idaho Falls areas.

Olin Heikkola made a fast trip to Salinas and Reno in connection with relocations coming up soon.

Lloyd Allen completed VOR approach control circuit at Sacramento Tower and the modernization of Mt. Shasta Weather Bureau teletype installation. He is now at Klamath Falls assisting Carl Weidert with the UHF installation at the remote site.

Carl Weidert spent a few days assisting Bill Foker with ATCS modernization at Burbank then went to Klamath Falls where he is installing UHF equipment at the remote site.

Walter Cooke, student trainee, has been assisting Carl Weidert at Klamath Falls. He goes back to the University of California at Berkeley at the end of the month.

Tommy Bracken and Vic Simmons have been installing A/G console equipment at Toledo ATCS under the general direction of Howard Pyle. Tommy is now on his way to Bryce Canyon for another ATCS modernization, and will be joined by Lance Guyton and Roger Greenman.

Howard Pyle, Johnny Biggs and Delmar Shelton are taking over the Toledo ATCS modernization. Bob Payne and Max Harvey have completed their many projects at Great Falls and are now headed for Seattle and Toledo respectively.

Relocation of the Cedar City antenna was started by William Pedri and Howard Glover. Howard is a new employee assigned to Group II of the section.

A survey for temporary sites at Price and Riverton was completed by Orion Betz. These sites are for the interim communication program.

George Martin and Erich Hoeft began the modernization of the Grants ATCS where they were joined by Robert Shinliver, a new employee of the section.

Sam Rosenfeld is currently at Long Beach ATCS where he is being assisted by Fred Gebler and Anthony Maglica. The crew completed the installation of a communications channel in the Long Beach Control Tower for radar control.

Ed Pardee, Murry Asilowitz and Don Collins arrived at Albuquerque to make final preparations for relocation of operation from the existing control tower to the new tower.

Bill Foker, Dave Hegland, Clyde Baker and Donald Landau completed the installation of a communications channel in the Burbank Control Tower for radar control, and are now working on the ATCS modernization. (Continued on next page)

Dave Hegland began work on the relocation of the Regional Office Message Center to new quarters.

Fred McCauley and John Elwood continued the rearrangement of teletypewriter equipment at the Albuquerque ATCS.

Eskil Holt is representing the Communications Electronic Section in the selection of a permanent peripheral site at Roswell for the Albuquerque ARTC Center.

Paul Allee, the Preator Boys and Tom Carrington completed the relocation of the ground control equipment at San Francisco Tower. Paul, Darel Preator and Tom have started the ATCS modernization at Grand Junction while Dick Preator and Ira Schrawger have started the ATCS modernization at La Junta.

Mike Domitrovich and Franklin Kohagen completed the ATCS modernization at Lewistown. Domitrovich has returned to duty with the Navigational Aids Section and Kohagen will join Dick Preator at Akron.

Jim Cheatham, Lavern Cope, LeRoy Dale and Donald Gaba are in process of relocating the Denver MEDIS to allow for the ARTC Center expansion.

Jim Carr, Joseph Smith and Everett Harvey completed the Miles City ATCS modernization and have started the Butte ATCS modernization.

Plant Engineering Branch

Stanley Erickson completed a VOR survey in Beatty area. He is at present surveying the Duck Valley VOR in the vicinity of Pioche and is being assisted by Robert Burgess.

Jack Scherbel with the assistance of John Merriam completed the Congress Junction VOR test. Merriam is completing the lease negotiations and Scherbel has gone on to conduct another VOR survey near Oxnard.

Wm. Beekman is performing the Fircrest VOR site survey.

Frank Sibby and Maynard Hegland made the Coxcomb VOR survey. Sibby is now on another similar survey at Peach Springs with the assistance of Tom Long.

Clifford Halton completed the staking of the Newhall VOR access road and is now surveying a site for the Piru VOR facility. Earl Trejbal and Jim Marriott are assisting with the survey.

V. O. Vick has completed the construction of the Harbor Island FM and is on his way to Portland to supervise the installation of an engine generator at the Portland Remote site. Upon completion of the work at Portland, he will return to Harbor Island and dismantle the existing FM facility.

Maynard Hegland is supervising the construction of an access road to the Newhall mountain top VOR site. Upon completion of the road, he will grade and level off the VOR site. Bad weather is hampering the progress of the work.

Thomas Tarpo is supervising the construction of a VOR facility near Hugo.

Marion Duncan is supervising the construction of the Mountain Top VOR near Pinon and the construction of a garage at Pinon to house a 4-wheel drive maintenance vehicle required to reach the site.

(Continued on next page)

John Franklin is working on the Sequence flashing lights at the Los Angeles Airport. John Davenport is making the survey for the ILS and ALS at the Long Beach Airport. Harry Mellen is supervising the construction of the Monterey ILS.

Frank Dettmer was involved in an automobile accident on December 21, 1956. Frank was proceeding with his wife to Seattle to install radar targets at SEA-TAC. About two miles south of Roseburg, Oregon, Frank had stopped at the direction of a highway construction crew. Another car that was headed in the same direction ran into the Government car from the rear. As a result of this collision, Frank suffered a fractured neck vertebra resulting in complete paralysis from the neck down. It is reported that Frank will have to remain in the hospital approximately 18 weeks. Frank's wife was not injured. He was taken to the hospital at Roseburg, then moved to Providence Hospital in Seattle, and is now being cared for in the Marine Hospital at Seattle.

Norman Seewald has been called to temporary duty at Washington, D.C. for a period of two weeks, and will be back in the office at the end of the month.

Dave Domaskin and Ralph Riley have completed the field survey for an ASR-1 facility at Colorado Springs. They are now engaged in preparing plans, estimates and a proposal for this work.

George Bishop has completed the lowering of the ASR tower at San Francisco. As soon as the proposal is issued for the Albuquerque Center job, Bishop will be assigned to supervise the work at that location.

Don Medwedeff has completed plans and specifications for a Type "S" building at Salt Lake City, and will proceed to that location as soon as a proposal is issued.

Dave Peppin has completed the installation of mirror guides at our entrance road at Pendleton, Oregon.

Fred Lee is supervising the renovation of the Denver ATCS ARTCC quarters.

Gene Newman is investigating the cables for a PAR installation at San Francisco and Oakland, and will place these cables in proper condition for the installation contractor.

Forrest Coulter is preparing plans and specifications for a DF antenna on the Los Angeles ATCT.

Surveys have been completed at Salinas and Reno for the construction of new antenna support equipment by William Murray and construction at Salinas is being started by Jim Pace.

Proposals were issued for the expansion of the Air Route Traffic Control Centers at Spokane, Great Falls and Oakland. Work is underway at Spokane and Seattle under the supervision of Grant McClure and Dave Evans, respectively.

Surveys for permanent peripheral communication sites at Idaho Falls and Riverton are being made by William Dawson and Melvin Emerine.

Len LaFornara, together with C.W. Vroman, Kenneth Dye, Paul Rowland, Paul Curran and John Ellis are selecting and surveying permanent peripheral communications sites at Roswell, Truth or Consequences, Bryce Canyon, and North Bend.

(Highlights continued next page)

Maintenance Engineering Branch

Jerry Melville headlines the news by shuffling off to school! That's right, he is currently attending ATC Class at the Aeronautical Center and will return about February 8th or 9th after stop off in Fort Worth and Albuquerque. At the latter place, he will attend District Four Conference scheduled to convene February 7. His chair in the office is being temporarily occupied by the new Deputy Branch Chief, Erwin Stentz who succeeds Vaughn Clayton since the latter's departure for his new assignment in Athens, Greece.

We are repeating the Administrator's letter of December 18, 1956 "Reliability of Air Navigation Facilities" for those who may not have seen it before.

> "I recently reviewed the reliability record of our Air Navigation Facilities for the period May 1955 through April 1956, and I was certainly impressed with their splendid record of performance.
>
> "The high point of this record is that, except for planned shutdowns, they are on the air 99.8% of the time. Even counting all shutdowns, including modernization, they are still on the air 98.3% of the time. Shutdowns for preventive maintenance are only 0.2% of total time and unanticipated outages are also only 0.2%. This record is excellent and is a great tribute to our design and construction, and to our maintenance.
>
> "I wish to express my personal appreciation to our people in the Washington and Regional Offices and, most strongly of all, to the technicians who are maintaining these facilities for this splendid record.
>
> "With increased air traffic, the need for the utmost in the reliability of our facilities will become even greater and we must continue these efforts toward perfection. As the air becomes more crowded, and the control of air traffic becomes more complex, the need for utmost reliability in the ground facilities becomes ever more urgent.
>
> "I sincerely hope that we can maintain this find record, even with our greatly expanded program, and I am confident of your continued support toward maintaining and even improving on this remarkably high level of dependability."

The Branch Chief wishes to re-express sentiments of gratitude and appreciation for a job well done by the entire Regional Maintenance organization in the field and office.

Ken Willits has reported into Section LA-677 where he is a welcome addition to the staff of Navigational Aids Specialists laboring in that department. He still has that fresh and clear-eyed "field" look about him! George Fischer, also a recent addition to LA-677, from the Radar section is on his way to Scott Air Force Base for TACAN training. This change is in connection with Branch realignment of program responsibilities in the Sections which is being finalized and will be reported to the field in the near future.

The joint CAA/USAF initial inspection of the Fairchild RAPCON facility, scheduled for CAA maintenance in March of this year, was conducted during the early part of January.

(Continued on next page)

Regional Office representatives from LA-670 and LA-625 made the long trek from Los Angeles to Spokane to conduct the inspection with the able assistance of ATDS Bob Wood and Liaison Engineer Erv Schulz.

Dave Earley recently had the opportunity to participate in a Joint Military-Gilfillan conference on air traffic control and air navigational aids with primary emphasis on radar equipments. Present system equipment limitations were cited by military representatives and proposed design improvements were presented by the contractor. In addition, interim measures involving improved maintenance techniques were discussed by those in attendance. At the meeting, Mr. Earley was pleased to hear from several persons good reports concerning the proficiency of CAA maintenance of the complex Moving Target Indicator (MTI) equipment used in modern airport surveillance radar systems. Such comments speak well for the CAA radar program and, in particular, for the many Electronic Specialists directly maintaining the equipment.

Kirk Barry has returned to the Regional Office after completing the USAF TACAN School at Scott Air Force Base, Illinois. Kirk has been assigned to the Radar Systems Section.

Personnel who have graduated from the Aeronautical Center during the past month are: Raymond Hawk of Spokane and Marion Neary of Laramie, - ILS/VOR Class #119; Bernard Wingert of Gila Bend, Charles Chase of San Francisco and Roy Tunby of Denver - DME Class #118; Harold Pinnock of Douglas, Arizona, Bob James of Salinas, Norris Griswold of Seattle, Keith Hunter of Great Falls, R. Chesney Jameson of Fairchild AFB, Grant Eckholdt of Long Beach, Gerald Dobson of Portland, Louis Schmitt of Albuquerque, Byron Mabee of Long Beach, Harold Eggers of Burbank, Joseph Ringhofer of Salt Lake City and James Ells of Los Angeles - ASR/PAR Class #114; John Livingston of Trinidad and Calvin Gordon of Prescott - Communications Equipment Class #69.

Students who have been enrolled in classes at the Aeronautical Center during the month of January are: Raymond Hawk of Spokane and Thomas Lym of Pocatello - ILS/VOR Class #120A; Richard Koeppler of Seattle, Marion Neary of Laramie and Walter Blankmann of the Regional Office - DME Class #119; Carl Anderson of Portland, Clyde Olsen of Seattle, Clyde Moore of Kirtland AFB, Clarence Stevenson of McChord AFB, Stanley Hall of Hill AFB and Chester Oppen of Spokane - ASR/PAR Class #116.

On November 26, 1956, a new training class was started within the Region called "RAPCON Air/Ground Communications Equipment Training," which is under the direction of the able Instructor, Floyd Corpus. Our first class was held from November 26 to December 21 at Kirtland AFB, Albuquerque, and those in attendance were: Clyde Brookman and E. Devont Stowell of Fairchild AFB, Spokane, Max Kelch of March AFB, Riverside, Arthur Patton of Hill AFB, Ogden, Andrew Gordish, Floyd Johnson, John McKeehan, Arthur Meek of Kirtland AFB. Also, Frank Goodlive, Clyde Moore, and James Thomas of Kirtland AFB attended portions of this class.

Our second class on the above training began January 7 at McChord AFB, Tacoma, and those currently attending are: James Bailey, Robert Gordon, and Norman Hansen of Fairchild AFB, Richard Harmon of Kirtland AFB, Carl McKay and Dale Anderson of Hill AFB, Martin South of March AFB, Howard Johnson, Larry Tarranoff, Richard Lynch, Edward Porten and Carlos Keasler of McChord AFB.

Flight Inspection Branch

William Talunas of the 6th Region Flight Inspection Branch is transferring to this office and will be based at Los Angeles. He will report for duty approximately February 25.

(Continued on next page)

Flight Inspection Branch Continued

Bob Lewis and John McCormick have transferred to Aviation Safety. We wish them the best of luck in their new positions.

The Salt Lake City based DC-3 recently returned to Salt Lake following 150 hour check at our Santa Monica hangar.

VOR sites at Show Low and Congress Junction have been flight checked with the mobile VOR and found satisfactory for permanent installation.

San Jose TVOR and El Centro VOR have been flight checked and commissioned.

AIRWAYS OPERATIONS DIVISON

John Munds of Airways Operations and Milt Bezouska of the ANF Division attended a conference January 3 at Hamilton AFB to discuss coverage requirements for joint use long range radar at Los Angeles and Seattle.

Bill Breniman and John Munds represented Airway Operations in a meeting of Air Force Commands January 9 at Los Angeles where the region's long range airways program was reviewed and discussed. A similar meeting is planned with Naval groups at Los Angeles early in February.

We have been advised that the City of Fullerton, California plans to establish airport traffic control service at its Municipal Airport.

Ed Hart of the Honolulu regional office spent several days in southern California visiting airport traffic control facilities and the regional office. He made inquiry regarding methods and procedures followed in this region regarding airport traffic control and terminal aids.

K. El Meligy, Airport Manager at Cairo and representative of the Egyptian Government completed his detail at the regional office and proceeded to San Francisco where he will study airport management methods at San Francisco International Airport.

John Munds is now in Washington to resolve problems dealing with Center expansion and communication requirements for the high altitude control program.

Bob Graner, together with members of the ANF Division, completed a survey of the SPAR unit (portable precision approach radar manufactured by Laboratory for Electronics at Boston) which is being operated and maintained by the Boeing Aircraft Corporation. The survey was made to determine whether CAA should take over and operate the installation.

Tom Rigdon from Washington observed terminal radar operations at Portland, San Francisco, Oakland, and Los Angeles. As a result of his discussion we have recommended installation of a visual coordinating system in the San Francisco tower and reassignment of the Oakland second repeater scope to Portland. The Oakland unit will be replaced later when additional scopes become available.

San Francisco has under consideration a plan to construct about 2,000 square ft. of additional building space on the 6th floor of the Airport Administration Building for use as an IFR room and to provide additional equipment space. The demand for additional radar consoles exceeds the space available within the tower cab.

(Continued on next page)

A regional standard installation for a visual radar coordinating system has been developed and is planned for installation in each radar tower along with other equipment projects.

Standard directories showing landline circuits used for air traffic communications will be prepared every six months beginning February 1. Ray Tripp, Chief of the Salt Lake City station is being detailed to the regional office to assemble the first issue.

Work has begun on preparation of leased wire requirements for F.Y. '59, including circuits and extensions needed for CAA and military facilities, relocations, high altitude control, increased workload, etc.

Joint evaluation of the Transcribed Weather Broadcast service at Los Angeles was made by Airway Operations and Maintenance representatives and the completed report was forwarded to W-500 and W-600.

A priority system for resumption of leased intercity private line telephone and teleprinter services was prepared and forwarded to Washington in line with the requirements of ODM.

Len Middlekauff represented Airways Operations at a meeting of the Airport Use Panel at San Diego. It is hoped that the Panel will render a decision soon regarding the San Diego Airport situation.

George Durand of the Oakland Center spent a week in the regional office revising the Airway Master Plan to reflect changes developed by the Oakland Center as a result of a simulated study by TDC.

The Seattle Center reports that the Portland peripheral communications site is giving excellent results on the UHF channels installed and undergoing test. Actual commissioning is expected within the next 30 days.

Radar departure control was inaugurated at Fairchild RAPCON January 7, 1957. Radar arrival control is scheduled for commissioning February 4, 1957. Present plans call for commissioning en route control April 22, 1957.

Lloyd Richmond, for many years chief of the Great Falls Center, has accepted a position as Island Manager at Guam. We wish Lloyd the best of everything in his new position.

As of January 23, 1957, vacancies in Communications are in excess of 200 with only 60 eligibles on the register. However, this is 60 more than we had a few weeks ago so the situation is looking up. Field facilities have been of inestimable service in the recruitment campaign. Their continued support and cooperation in this program is earnestly solicited.

Automatic scanning has been inaugurated on all Area "B" teletype circuits in this region.

Overall results of the AOS reclassification as of January 13, 1957 are as follows:

518 employees promoted.

298 additional employees will be promoted if we are successful in obtaining

(Continued on next page)

individual Whitten Amendment waivers. These promotions will be effective on the date we are advised that our requests for such waivers have been approved.

The positions of 50 employees were down-graded. The incumbents have been offered the option of transferring in order to retain their present grade or of accepting down-grading in order to remain at their present location.

Meetings were held in Tucson and Phoenix on January 16, 17, attended by military officials, airline representatives, Aviation Safety, and AOD personnel relative to the increasing VFR collision hazard in the vicinity of Davis-Monthan AFB, Williams AFB, and Luke AFB. Operations Supervisor C. A. Church represented AOD. These first meetings were exploratory in nature and all concerned were made aware of the problems involved. It is expected that further meetings will be required to develop any agreements to help alleviate the conditions.

Work is progressing rapidly on the addition to the Los Angeles ARTC Center quarters. Work has started also on several of the other Center expansions. Every possible effort is being exerted to complete the expansions prior to April 1957 when the Centers are scheduled to begin control of all airpsace at 24,000 feet and above.

The Amarillo peripheral communications site serving the Albuquerque Center was commissioned on January 18, 1957.

Jurisdiction of the control area in the vicinity of Boise was transferred from the Salt Lake City to the Seattle Center January 21, 1957 to meet certain Air Defense requirements. The Boise peripheral communication site which is being terminated in the Seattle Center is scheduled for commissioning during February.

A national meeting of ADLOs is scheduled at San Antonio February 5. All six of our ADLOs will attend. Mert Claar has been designated as the spokesman for the regional office.

A conference of the 27th Air Division was held on January 10 and 11. During this conference ADLO Claar participated in the portion involving CAA activities and briefed the conference on scramble and recovery problems, AMIS operating problems and other activities. As a result of the conference, the Operations Officers from each of the ADC radar sites are being directed to visit the Los Angeles AMIS to discuss the many problems that arise between the two facilities.

ADLO Claar discussed with Vern Tyler, President, California Association of Airport Executives, the forthcoming changes in the SCATER Plan as it affects airport managers and made plans to meet with him and other members to disseminate the necessary procedures and material as soon as SCATER Plan has been finally approved.

Bill Larsen completed a visit at all facilities in the State of Washington, January 9. As of that date, he and Art Johnson have visited all facilities in the region during the past 365 days.

* * * * *

C.A.A. REGION FOUR

FEDERAL CREDIT UNION

The annual meeting of the Region Four Federal Credit Union was held on January 15, 1957 at the Regional Office Cafeteria for the purpose of determining the dividend rate for 1956 and electing officers for 1957.

Net earnings for the year were $75,772.06. This is equivalent to 4.99% of the participating shares. In addition $2,384.31 undivided earnings were carried forward from previous years making a total of $78,156.37 available for distribution.

By formal resolution the Board of Directors recommended a 5% dividend for 1956. This was voted upon by the members present and passed without dissenting vote.

Following the election of officers (newly elected or re-elected members designated by asterisk) the Board of Directors and Committees for 1957 are as follows:

Board of Directors

- * Elwood B. Cole (President)
- Robert F. Denzer (Vice President)
- * John A. Garrison (Treasurer)
- Florence L. Smith (Secretary)
- Kenneth B. Wall
- * Edmund J. Jakobi
- * Fred F. Townsend

Credit Committee

- * F. A. De Andrea (Chairman)
- Robert O. Blanchard
- * Eleanor Main

Supervisory Committee

- * Henry Slater (Chairman)
- Merrill H. Griffith
- * James P. Chadwick

- -

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: Loans up to $400 may be granted on signature alone if employed by CAA 3 years or more. Higher loans are available provided adequate collateral is furnished, such as automobile, co-signers, etc.

1/57

FINANCIAL STATEMENT
CAA REGION 4 FEDERAL CREDIT UNION
Year Ending December 31, 1956

ASSETS		LIABILITIES	
Loans (1885)	$1,875,686.31	Shares	$1,802,051.52
Cash in Bank	22,185.01	Accounts Payable	6,346.35
Change Fund	10,941.90	Regular Reserve	53,650.95
Loans to other Credit Unions	24,762.66	Undivided Earnings	78,156.37
Furniture & Equipment	6,547.31		
Other Assets	82.00		
TOTAL ASSETS	$1,940,205.19	TOTAL LIABILITIES	$1,940,205.19

INCOME AND EXPENSE --- YEAR 1956

INCOME		EXPENSES	
Interest on Loans	$ 163,496.78	Salaries	$ 40,375.11
Income from Investments	1,299.67	Borrowers' Insurance	10,625.40
		Life Savings Insurance	6,893.82
		Communications	2,529.30
		Calif. C.U.League Dues	1,384.24
		Independent Audits	1,248.40
		Other Insurance	1,067.15
		Examination Fees (Federal)	972.51
		Supervisory Fees (Federal)	403.40
		Depreciation,Furn. & Equip.	686.34
		Surety Bond Premium	662.81
		Social Security Taxes	649.60
		Stationery & Supplies	517.71
		Recording & Transfer Fees	446.50
		Armored Car Service	441.60
		Officer & Committee Meetings	424.50
		Educational Expense	210.75
		Interest on Borrowed Money	177.25
		Legal Expense	150.00
		Bank Service Charges	131.50
		Cash Over & Short	14.50
		Miscellaneous General	68.98
		TOTAL EXPENSE	$ 70,081.37
		Transfer to Reserve	18,943.02
		Undivided Earnings	75,772.06
TOTAL	$ 164,796.45	TOTAL	$ 164,796.45

LOAN STATISTICS

	Number	Amount
Loans Granted, Year 1956	2241	$2,395,754.20
Loans Granted since Organization	9177	8,236,232.92
Loans Charged Off, Year 1956	4	1,089.88
Loans Charged Off since Organization	13	3,634.80

Credit Union Organized, October 1, 1949

A REGION 4 FEDERAL CREDIT UNIO

COMPARISON REPORT

		Year 1954	Year 1955	Year 1956
1,	New Accounts Opened	650	618	702
2.	Number of Accounts - end of year	2421	2925	3461
3.	Number of Loans Granted	1442	1988	2241
4.	Loan Balance - end of year	$1,043,416.68	$1,496,827.08	$1,875,686.31
5.	Share Balance - end of year	1,234,998.42	1,503,021.66	1,802,051.52
6.	Total Income	90,278,29	124,457.28	164,796,45
7.	Total Expense	41,692.28	52,677.79	70,081.37
8.	Transfer to Regular Reserve	9,717.20	14,355.90	18,943.02
9.	Balance of Regular Reserve	23,218.19	35,612.81	53,650.95
10.	Earnings after Provision for Reserve Amount	38,868.81	57,423.59	75,772.06
11.	Earnings after Provision for Reserve Percentage	4=16%	4.69%	4.99%
12.	Total of Undivided Earnings - end of year	38,901.30	57,774.49	78,156.37
13.	Dividends Authorized by Members - percentage	4=1%	4.5%	
14.	Dividends Paid to Members - amount	38,550.40	55,390.18	
15.	Dividends Paid to Members Since Organization	91,466.74	146,856.92	
16.	Benefits Paid by Cuna Loan Protection Insurance	871.67	7,024.66	11,964.95
17.	Benefits Paid by Cuna Life Savings Insurance	2,789.77	1,337.09	2,024.43

Regional Administrator's Column

I recently received a letter from our friend and former co-worker, R. W. F. (Bob) Schmidt of Tucson (who operates what he modestly describes as "ARIZONA'S AIRPORT"). Bob writes as follows:

"Dear Walter:

"Your personable, able, amiable Edmon J. LaDue, Chief Controller here at ARIZONA'S AIRPORT always brings me the Region 4 News (I have got to say these nice things about him because he is the mainstay to our bowling team) primarily, I suspect, just to hear me comment on some feature to which he draws my attention.

"For one thing, it is a great shock to read that guys I regarded as young things are drawing their thirty-year pins - Art Herbert, Gene Mathews, Harry Nunn - and that fellows I regarded as older than Methuselah are just getting their twenty-year pins - Len Ashwell, Johnny Campbell, Gerry Webb, Bob Dake - right along with such squirts as Carl Hand and Charlie Grosh.

"For another, I view with alarm 'Divison Highlights'' when it says quite simply that 'Mr. Winger attended the National Airports Conference at Norman, Oklahoma ---'. Walt, that is an understatement if not deliberate misrepresentation. There were moments when he WAS the National Airports Conference!"

We were not surprised to learn that Charlie Winger did more than just attend the National Airports Conference and reference to the twenty-year and thirty-year pins brings home to us a significant fact. We are losing, at a somewhat alarming rate, men who have directed the activities of the CAA and the old Bureau of Air Commerce, in various capacities, for nearly a quarter of a century. In Region 4 alone we have seen quite an exodus during the past two years. There was Jim Read, followed by Joe Marriott. More recently others have deserted us, including Armer Alcorn, Stan Boggs, Reese Clark, Art Hook, Clarence Butler, George Johnson and Tom Flaherty. We can expect before long many more names to be added to the list. And because of the number of old timers we have lost and will continue to lose, through retirement, the Administration is hard pressed to find suitable replacements. All this adds up to one thing - an excellent opportunity for advancement for the employee who does an outstanding job. I think we will all agree that as jobs go the "Uncle" treats us pretty good. This must be so because of so many capable men and women who have devoted so many years to the CAA; who have stayed put and not gone in search of greener pastures. Probably there are cases where to get ahead in a job a person must get the breaks as well as having the know how. But how often do the breaks come and the person is passed by because he cannot deliver the goods?

One thing is certain - life is change. We either forge ahead or we drop behind. We either progress or we stagnate. The thought I have in mind is beautifully expressed by the late Oliver Wendell Holmes, who said:

> "I find the great thing is not so much where we stand as in what direction we are moving. To reach the port of heaven, we just sail sometimes with the wind and sometimes against it; but we must sail and not drift, nor lie at anchor."

(Continued on next page)

Much of our sailing in CAA is against the wind. Undoubtedly there are those who feel that the high quality of their work and their abilities are not recognized and that their progress up the promotion ladder is too slow. But I believe that the employee who excells in his job and has patience will be recognized and rewarded; that eventually he will, as it were, make the grade and reach the top of the hill.

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THERE WAS NO ISSUE OF THE NEWS FOR THE

MONTH OF MARCH.