FLIGHT LINES

FEDERAL AVIATION AGENCY—REGION 3

MARCH 1960

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FEDERAL AVIATION AGENCY- REGION 3

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ON THE COVER

The Kansas City FIDO crew checking an FAA facility. Left—Kenneth VanArsdale; right—Howard Klingbeil; in the foreground—Ed Casey

• DIVISION REPORTERS •

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From The Regional Office

From The Editor . . .

Recently Senator Monroney of Oklahoma wrote Mr. Quesada commending the work of our Flight Service Station personnel at the FAA station in McAlester, Oklahoma, praising the cooperation and assistance provided to Senator Monroney while flying in that area.

The Senator singled out Jim Lawrence, communicator on duty, commending him for his help in checking the condition of his airplane's landing gear, which failed to give an "in the green" indication.

While this is just one in thousands of such instances where FAA employees, by the very nature of their jobs and their skills, have provided valuable assistance and have saved many an aircraft and its passengers from possible disaster, it does bring to light the fact that many such services do take place and so often go unnoticed, except to those concerned.

In commenting on this incident, Mr. Quesada stated to Mr. Lawrence, "You and your colleagues in the field are very often the Agency's only direct contact with the public, and such acts of public service, kindness and courtesy as Senator Monroney describes are certainly in keeping with the highest standards of the Agency and the Federal Service."

While it might not seem newsworthy to those of us in the business, such incidents make interesting reading for the public and in publicizing such happenings we are reporting to the public the high quality of service and the contribution to flight safety which the FAA operating people are constantly performing.

Many of you have made a practice in the past of reporting such happenings either to the local press as a news story or to the Regional Office for handling. We urge you to continue this policy in order that the general public may become increasingly aware of the many services performed by the FAA in their behalf.

Marshall C. Benedict

Marshall C. Benedict
Regional Public Affairs Officer

FLIGHT INSPECTION —

PRECISION CHECKING OF FAA FACILITIES

The Flight Inspector is a professional pilot who has received extensive training in certain electronic aspects that are necessary to his job of flight checking air navigational aids. When hired by the FAA he had all the aeronautical training necessary for the entrance qualifications. This required years of experience to accumulate the thousands of flight hours in heavy multi-engine aircraft in all weather conditions. From that point he had to learn (or be refreshed in) applied mathematics including trigonometric functions and slide rule. A working knowledge of applicable electronic principles and theory of operation of navigational facilities is necessary. This basic training may be obtained by a 10-week indoctrination course at the Aeronautical Center or by a study course that has been recently established in the Flight Inspection District Offices as a basis for on-the-job training. It is generally accepted within the FAA that a minimum of two years of training and field experience is required to develop a potential Flight Inspector to journeyman status.

This intensive training and extensive experience is needed to properly evaluate and analyze the space radiation patterns, RF modulation, signal coverage, frequency interference, course accuracy and stability, etc., of all electronic aids to navigation. As a pilot, he must observe general radio facility operation from the user's viewpoint, being primarily concerned with the "flyability" of course indications. He must keep the safety and dependability aspects uppermost in his mind during his evaluation; this is particularly critical on flight checks of instrument landing systems.

Obviously, human lives are directly dependent on the integrity of the complex electronic facilities that make possible our common system of navigation. These facilities are planned, installed and maintained by skilled and dedicated FAA technicians. The electronic performances of the units are continuously monitored by integral detector devices and routinely by maintenance personnel using special test equipment. Experience has shown that electronic air navigation aids may not always provide accurate information to the aircraft, though ground measurements of the ground equipment indicate normal operation. This may be due to reflections of the radiated signals from terrain features, manmade obstructions, radio frequency interference and other causes.

The Flight Inspector, therefore, has the final responsibility and authority to certify the operational adequacy of each facility. He must restrict or suspend the operation of any facility that is found operating out of established tolerances. He coordinates with engineering and maintenance personnel in the correction and re-checking of the malfunctions noted to insure that unsafe conditions are eliminated.

Assistance in accident investigations is furnished by the Flight Inspection Branch. It is mandatory that special flight checks be made of any FAA facility that may be concerned in such accidents. For this requirement, all Flight Inspectors are on call at any hour of the day or night. In several instances, after-accident flight checks have been made in the middle of the night

in near zero-zero weather conditions. For the purpose and necessity of conducting facility flight checks, even routinely, Flight Inspectors are administratively granted authority to deviate from certain Civil Air Regulations and weather minimums for takeoffs and landings.

The airplane that carries the black boxes to "read" the facility performance is the old workhorse, the DC-3. We have six in this Region. Two DC-3s are based at each of our Flight Inspection District Offices (FIDOs for short) located at Kansas City Fairfax, South St. Paul, Minn., and Battle Creek, Mich. Two Beechcraft are currently used to handle workload peaks, and these will be replaced by DC-3s in the near future.

On the exterior, our DC-3s look very much like any other of the old workhorses except for the bristle of antennas. Inside, the resemblance ends. Racks containing 41 precisely calibrated electronic units are lined up along both sides. A wide console filled with a multitude of meters, switches and dials represents the panel operator's position; also, here is an electronic recorder which traces eighteen separate functions on photo-sensitive tape. This furnishes a graphic record of the performance of the navigational aids.

The pilot's instrument panel has over twice the number of navigational instruments that are installed on airline aircraft. This is necessary in order to check two receivers of each kind against the other to eliminate the possibility of unrecognized receiver malfunction. Weather surveillance radar is installed, and a very capable automatic pilot which can fly VOR or TACAN courses, closely maintain a pre-set altitude, and even make an instrument approach.

All of this amounts to a considerable investment, with the installed equipment worth far more than the original plane. Even though these planes are of pre-World War II vintage, they have been fitted with higher performance engines and are thus rejuvenated to the extent that they cruise nicely at 195 mph. The 2-stage supercharger gives capability to climb to 25,000 feet, although we rarely exceed 15,000 feet.

Despite the ever-present hazards involved in flight checking facilities, and particularly in high density areas, Flight Inspection pilots, here and agency-wide, have established a fine safety record. Over 50,000 hours, representing 8,500,000 miles, have been logged in this Region without an accident or incident involving more than very minor damage. Flight safety is continually stressed. Regional policy is strict as to pilot check-outs in Flight Inspection aircraft and on annual proficiency checks. Our pilots' total flight time experience averages about 7,000 hours, with logged hours individually ranging from 3,800 to 14,000 hours. Eight veterans have well over 10,000 hours to their credit.

The minimum crew for facility flight checks consists of two pilots and one electronic technician. The latter works the complex electronic console, monitoring the many meters that report facility performance. He runs the somewhat temperamental $8,000 recorder mentioned previously, and from information thus recorded, reports to the pilot course deviation, course width, glide slope angle, signal strength,

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(Left to right) Paul Untersee, Ed Casey and Harold Anderson — analyzing recordings from a recent flight check in the FIDO office at Fairfax Airport.

JOSEPH STURGEON, FAA electronics technician, monitors radio signals from the ground as check flight ship follows landing pattern.

flag current and other modulation qualities. On some flight checks, two technicians are necessary to handle all the data that is fed from the receivers.

Flight checking is hard work for everyone in the crew. Pilots must fly precise courses and altitudes. They must be on constant alert for conflicting traffic. In control zones, continuous radio contact with the towers is required. At Chicago Midway, for example, it is not unusual to fly 3 to 4 hours on the periodic ILS check, quite often making runs against departing traffic, or possibly worse, between the arriving traffic. With the usual reduced visibility in the area and the necessity to monitor simultaneously tower, approach control and ground technicians communications frequencies, it is hard on the nerves.

Approach and tower controllers do a fine job in providing safe traffic separation for us and expediting the flight checks, even during their busiest times.

Facility flight checking is also done for Army, Navy and state-owned navigational aids under agreements and contracts on a reimbursable basis. We anticipate that Air Force-owned aids will eventually come under our flight check responsibility, as a part of Project Friendship.

We also expect to assume the responsibility for the development and periodic evaluation of enroute and terminal procedures, now being accomplished by our very capable cousins in the Air Carrier Safety Division. Procedures, loosely defined, prescribes the manner in which an aircraft departs and flies "on instruments" to the destination airport on a specified route with the assurance that the enroute and terminal aid procedures, if followed, will provide for climb and descent rates, obstructions clearances, turning radii, holding patterns, runway intercept angles, and missed approaches that are consistent with safe aircraft operation.

FAA REPORTS TO PUBLIC

The task of promoting and assuring aviation safety and efficiency is "both enormous and difficult" **Federal Aviation Administrator E. R. Quesada** stated in the Agency's first annual report to the President and the Congress which was issued on March 8, 1960.

Mr. Quesada said that the best efforts of government, the aviation industry, the military and the American people will be required to cope with aviation's present and future problems.

The Administrator said the Agency's first year of operation has shown that the Federal Aviation Act is **"basically sound in concept and workable in practice."** He reported that by the end of 1959, the organization of the Federal Aviation Agency had been established and the internal distribution of responsibilities had been clearly fixed.

The FAA report to the President and the Congress also includes the following highlights:

During 1959, FAA engineers and test pilots approved, flight tested and certificated 3 new jet airliners, 17 business and general aviation type aircraft and 5 helicopter models.

Another significant event of 1959 was the establishment by FAA of a new Business Operations Branch to monitor and set the safety standards for all air taxi, executive and other business flying.

The Agency's first year was also marked by new developments originating from joint FAA-military cooperation. FAA safety inspectors received jet training at the Strategic Air Command's Castle Air Force Base, and FAA secured the use of Air Force radar as a supplement to its own radar network to conduct almost complete takeoff to landing surveillance of all commercial jet airline flights.

FAA flight inspection pilots logged more than 40,000 hours in 1959 in flight checking the accuracy of the hundreds of navigational aids used to guide the nation's aircraft in their flights across the country.

The report also reveals that during the past year, 47% of the Agency's employees were engaged 24 hours a day, 7 days a week, in some form of air traffic control.

The annual report notes FAA air route traffic control centers handled 9,589,000 IFR (Instrument Flight Rules) movements along some 220,000 miles of Federal airways; FAA towers handled 26,866,000 landings and departures, and the Agency's approach facilities controlled 1,055,000 instrument approaches to airports. These figures represent a considerable gain over 1958.

To meet the needs of this expanding volume of air traffic, the Agency commissioned a new navigational aid or air traffic management facility at the rate of one a day for a total of 365 for the year. These included, in part, 72 approach light systems, 11 new airport traffic control towers, 18 long range radars, 9 precision approach radars, and 2 airport surveillance radars.

New FAA airspace allocation procedures also opened up for the use of civil aircraft nearly 10,000 square miles of new airspace.

The annual report shows that during its first year, FAA in support of its aviation safety mission administered 105,000 written examinations covering 35 areas of aviation knowledge, issued more than 40 Special Civil Air Regulations involving approximately 200 individual changes, issued and recorded 44,137 aircraft registration certificates and 166,000 airmen certificates and associated ratings, and participated in more than 12,000 semiannual flight tests of the nation's airline pilots.

During the 1959 fiscal year, FAA approved 436 airport aid projects. These projects involved

$73,339,425 Federal Funds. As of the end of the last year, 1,050 active Federal Airport Act projects were under firm contract or grant agreement with sponsoring agencies.

GRADUATED

Recently completing FAA's Executive School at the Aeronautical Center in Oklahoma City Edward C. Marsh, Acting Deputy Regional Manager, George W. Kriske, Acting Chief, Air Traffic Management Division, and John A. Carran, Chief, Aircraft Engineering Division are back on the job with high praise for the course.

The two week course is part of a series of classes designed for high level management personnel to give participants the tools to develop improved management practices and to prepare them for the growing responsibilities of the agency.

THE CASE OF THE MISSING AIRPORT

Bob Clark, District Airport Engineer at Kansas City, has issued a plea for those owners of private airports in his area of Kansas and Missouri to speak up and be counted. Emphasizing the need to let the FAA know the whereabouts of all landing areas, Clark points out that the FAA receives notice of proposed construction of such things as TV towers, power and transmission lines, elevators and other tall structures. If such construction will be a hazard to an airport or landing area the airport owner will be so notified by the FAA, provided the location of the airport is known to us.

So, if you know anyone with an airport tucked away in his back 40, encourage him to let Bob Clark know of it. Bob will keep it a secret if the owner wishes, and it need not even be shown on the aeronautical chart.

THIS IS TOASTMASTERS TALKING

Aeronautics Toastmasters, Club 559, composed of R. O. personnel, held their Annual Club Speech Contest on Tuesday, March 1. Finalists for this contest are selected from a group of speakers having to their credit the greatest number of "trophies" for previous speeches given in connection with Toastmasters International Basic and Post Basic Training.

The following contestants were selected as finalists:

Charles Baker, ANF Division; Thomas Davis, General Safety Division; Wayne Karl, ANF Division; Eldon Kaup, ATM Division; and Milton Zeuner, Airports Division.

Wayne Karl, the winner, will compete in the Area Meet to be held March 19, 1960, at the Elks' Club.

Winner of the "Area Meet," competes in the "District," "District" winner goes to the "Zone" and "Zone" winner gets to compete in the "National."

Best of luck to Wayne Karl.

COME AND GO

The Legal Division lost their little southern secretary, namely Mary Ann Sullivan, on February 5, 1960. Mary Ann and her husband decided to return to sunny Mobile, Alabama, where snow is a treat rather than a daily occurrence. We don't blame her but we do miss her. Our new secretary is Sue Ann Thomas. (She's from the south too—south of Sedalia.) She comes to us from Grandview Air Force Base and their loss is our gain. Welcome to the FAA and the Legal Division, Sue.

A NEW VOICE

The airport at Champaign, Illinois, home of the University of Illinois School of Aeronautics, will be completed with FAA Control Tower and Flight Service Station facilities.

Schedule for commissioning the latter part of March (as of press time) the combined station tower will provide a much needed service to the airport and community.

Assigned as Chief of the facility is **Dale E. Warner**, who moves to Champaign from the Minneapolis - St. Paul Tower. Warner, who joined the CAA in 1949, has previously served in towers and stations at Lansing, Midway, Kansas City, and Springfield's CS/T.

Others assigned to the Champaign tower are Steven L. Goodman, Springfield, Ill. CS/T; James C. Gutshall, Evansville, Ind. CS/T; Wesley Howard, Springfield, Mo. CS/T; Clarence I. Schaefer, Flint, Mich. CS/T; Lloyd C. Wallace, Sioux Falls, S. Dakota CS/T, George D. Limbert, Topeka, Kan. CS/T; Gordon C. Hayman, Madison, Wisc. CS/T; Gerald Nichols, St. Joseph, Mo., CS/T; Merrill Bones, Butler, Mo., FSS; and Donald Sapp, Grand Island, Nebr., FSS.

Tower service will be provided on a 24-hour basis for the University of Illinois airport there at Champaign and additionally, voice communication on the existing Champaign VOR will provide en-route navigation information along the Federal Airways in that vicinity.

RADIOLOGICAL NEWS

1.5 volt flashlight cells of the "crimped bottom" type will not allow contact with the bottom terminal on the CD V-750, Dosimeter Charger. This, of course, even with a fresh battery, would indicate an inoperative instrument **(Ft. Wayne FSS).**

AIR CARRIER SAFETY DIVISION

INDIANAPOLIS DOINGS

Many changes have taken place since last reporting. During the Holiday Season our moving was completed from the upper deck of the Administration Building to the lower deck adjacent to the Employees Cafeteria. All furniture has been reshuffled and is now in place and we are settled again.

Mrs. Charles Murphy (formerly Miss Audrey Handley) has resigned her position to devote her full time to becoming a "Kitchen Engineer". Good luck Audrey.

Mrs. Jeanne Stump is replacing Audrey and is transfering from Mr. Lyle Brown's office. Welcome Jeanne to Air Carrier.

Another new face appeared on the horizion on January 4, 1960 Mr. Joseph Bloch arrived from New York for duty, his first assignment. He will assist and be tutored by Tom Peterec. Joe is house hunting and hoping to get settled soon. I want to become a grass farmer says Joe. Welcome Joe and we hope you like your new duties.

Indianapolis has become a regular bad weather stop for the Boeing 707 and the DC-8 in recent days, thats one way to get jet service to this city.

ST. LOUIS EPISTLE

Ozark Air Lines finally got their F-27 into the sky, after a lengthy labor dispute delay, beginning scheduled operation on January 4. Since then we've been up to our pretty little ears in training programs, t r a i n i n g flights, ground school courses and more or less heated arguments concerning same. EAL is using Lambert for Electra training, too.

We had a chance to improve our writing skills, supervisory technique, and personalities by attending the courses given at the St. Louis Center this month by Mr. Brock and Mr. Anderson. However, only three of our people were able to take advantage of the courses. Our new Clerk-Steno, Miss Carol Huck (acquired from General Safety to replace Mrs. Migliaccio) successfully completed the "Writing Improvement" course and we are now confident that Carol will be able to write letters that even the Washington office can understand. Incidentally, Carol was the only girl in the class, a fact, which at first horrified her and later proved a source of satisfaction. Mr. Hensel and Mr. Crouse took the "Human Relations" course. Mr. Rees, our Supervising Inspector was too busy and the personalities of our ladies are already over-developed. Inspector Benben doesn't need any "Human Relations" course. He is abundantly supplied with relations as it is, and is also quite human.

An illustration of Ben's extraordinary skill in human relations is his morale-building calendar which he has placed behind the desk of the aging aviation clerk. It has a picture of a rare, porcelain bowl (Japan Air Lines' idea of calendar art). Naturally, the first thing a visitor says when eyeing the bowl over the a/c's shoulder is: "What a dish!"

Nothing else to report except that Inspector Hensel has a new suit, bought with the overtime pay accumulated during the special 30-day inspection program. He looks really charmin' in it.

CHICAGO CALLING

Robert A. Kuehn, Maintenance Inspector, is the proud papa of a bouncing baby girl. She was born on February 2 and weighed in at 6 lbs. 11 ozs. Father and daughter reported doing well.

Meet the newest clerk-steno in the ACSDO 31—a lovely—young Chicago girl with a keen sense of humor and a fine personality (with a hearty appetite) — Jeanne Weiss. She is new in the Government service and enjoys her duties in the FAA. She has a Teaching Degree in Music—so the coffee break and luncheon topics are often on Beethoven's 32 Variations, Chopin's Polonaise in C Sharp Minor, Bach's French Suite, etc.—Darrin's Mack the Knife, and all that jazz. (Editors Note—How about a picture?)

A hearty welcome to a new member in the Chicago ACSDO, Inspector M. H. Law (alias "John Law"). His previous career was in the Navy here and abroad — winging over oceans and continents. All have words of praise on his very obliging manner and fine personality.

Congratulations to Inspector Harold A. Gardiner on his new assignment and promotion. Inspector Gardiner will leave us shortly to take over his duties in the ACSDO at Minneapolis. We can't understand Inspector Gardiner wanting to leave but there is nothing so persuasive as money.

Cold winds may blow and snow may fly, but sooner or later the female fancy turns to cultivating the flower garden in the corner of the office.

FROM KC ACSDO #33

H. B. Mitchell started his three months KC-135 training at Castle AFB, Merced, California, March 7, 1960.

C. E. Robbins spent two weeks in Atlanta, Georgia, with Delta Air Lines in connection with the Convair 880.

Bud Shaw attended a 4 week flight engineer course in February at TWA on the Convair 880.

Russ Nay is spending two weeks at the Aeronautical Center at Oklahoma City.

Stan Rogers spent two weeks at Pratt-Whitney Overhaul Base at Southington, Connecticut, during February, checking JT4 Engines.

If the spring thaw doesn't show up pretty soon, **Martha Beall** is going to set an ice-shack up on the Missouri River and start fishing!

Our stenographers must be making out okay these days as we have a couple that are sporting new cars.

The midnight oil is flowing freely at the **Wayne Canney** residence. It's now **Captain Wayne Melrose Canney USNR-R** and correspondence courses are being completed as rapidly as possible. (Anybody have a few extra gouges?) These four stripes can get pretty unbearable at times—who ever heard of personnel inspection every Monday morning in full uniform — especially at Fairfax Airport?

SPORTS NEWS

Our recent sledding weather was enjoyed very much by none other than G. A. "Porky" Williams and Wayne Canney along with the numerous spills, accompanying bruises and children!

CLASSROOMS IN THE SKY

An item of interest to the FAA and educators world-wide is the announcement that Purdue University — Purdue Aeronautics Corporation, West Lafayette, Indiana, has been authorized by the Federal Communications Commission to operate experimentally an airborne television transmitter beaming educational programs to six midwest states.

The Purdue Aeronautics Corporation will acquire two DC6A/B aircraft and will train crews to operate these airplanes. To house and maintain the aircraft, Purdue is planning the construction of a new hangar. The airport and runways will be worked on as soon as weather permits. The aircraft are to be equipped with JATO and radar.

Westinghouse Electric Company, being a participant, will supply and install 12,000 pounds of television equipment including a 40-foot telescoping antenna which will operate out of the bottom of the fuselage.

The experiment with UHF-TV will start next September and will operate within a radius of 150 to 200 miles, which would cover 34,000 square miles and serve educational institutions in Indiana, Illinois, Kentucky, Michigan, Ohio and Wisconsin.

There will be four transmitters on Purdue's campus that will send programs to the airplane cruising at 23,000 feet. The plane will retransmit the programs over four UHF channels, permitting simultaneous broadcast of two separate programs. Each program will be relayed by standard band and narrow band.

The experiment will be under the supervision of the Purdue Research Foundation, Ford Foundation and other groups who support educational work. Other participants are the Midwest Council on Airborne Television Instruction, Joint Council on Education Television, Westinghouse Electric Corporation, CBS Laboratories, General Dynamics Corporation and others providing advisory service.

CAN YOUR CITY MATCH THIS?

Wichita, Kansas (population 260,000) claims to be the "Air Capital of the World". To support its claims it points to the fact that within a 7-mile radius of downtown Wichita there are:

1) Three major aircraft plants —Beech, Cessna, and Boeing, two of which have their own airfields. All three conduct extensive tests flights of new aircraft.
2) A large municipal airport serviced by six airlines, and accommodating student pilots and business and executive aircraft as well as charter planes.
3) McConnell Air Force Base —a Strategic Air Command base—accounting for 2,000 jet take-offs and landings each month, and where Boeing's new B-52 and B-47 bombers are flight tested.

Normal daily air traffic over Wichita consists of all kinds and sizes of aircraft—from Piper Cubs to B-52 bombers. Three of the airfields, McConnell AFB, Wichita Municipal, and Beech Aircraft, have towers which control about 300,000 aircraft movements a year. All other fields operate without towers but contribute an enormous amount of air traffic. With so many aircraft flying on a variety of landing and take-off patterns the smooth and safe flow of traffic is a tribute to the skills of the control tower operators and the "air commercial, and military pilots discipline" of the many private, flying in the area.

—From Nat'l Aviation Education Council "Skylights"

THE TREND

"EVERY YEAR IT TAKES LESS TIME TO FLY ACROSS THE OCEAN AND LONGER TO DRIVE TO WORK."

A NEW SOLUTION TO THE PROBLEM

TWA's SKYLINER, employee publication, reports the following incident:

Antidote for the bomb scare publicity endured by the airlines the last month or two is found in this letter to President Thomas from passenger Samuel H. Cole, of Carnegie, Pennsylvania.

"The following incident on a recent TWA flight did much to create good will and confidence among passengers . . . several minutes after take-off, the captain's voice came over the intercom:

'This is Captain Smith. We are now cruising at 10,000 feet and will have a fine flight to Pittsburg. There isn't a cloud in the sky and the visibility is unlimited. It certainly is a pleasure to fly in this type of weather after the poor weather we have had during the month of January. The temperature upon our arrival in Pittsburg will be about 42 degrees, which is about 5 degrees warmer than in the New York area . . . Incidentally, you know that I am very happily married and have three lovely children. I like my job, the company for whom I work—and really enjoy living. The first officer has similar feelings, so if there are any of you back there who have any problems and feel the only way you can solve them is to go off the deep end, please come up to the cockpit and let's discuss them. If, after our discussion, we can't help you resolve your problems, and you still want to end it all, we will accommodate you and depressurize the cabin, open the door, and you may jump out!'

FEDERAL AID TO AIRPORTS '61

As announced on March 4th, Federal Funds totalling $58,835,103 for airport improvements have been allocated to 314 airports for the fiscal year 1961, under the Federal Aid Airport Plan, as announced by Administrator Quesada. Said allocation was based on the $63 million in Federal Funds available for the fiscal year 1961 program.

Some 40.9% of the dough goes for runway construction; 36% going for taxiways and aprons; 10.5% toward land aquisition; 3.5% for control towers, with lighting, clearings, etc, making up the balance.

Of the total, $12,446,846, representing 90 projects, is allocated for work in Region 3. By states, this is divided as follows:

Illinois	$1,418,550
Indiana	2,599,070
Iowa	331,719
Kansas	55,000
Michigan	2,830,725
Minnesota	1,905,409
Missouri	1,003,400
Nebraska	121,690
North Dakota	100,472
South Dakota	53,043
Wisconsin	755,200

The FAA funds for these projects will be available to project sponsors after July 1, 1960.

ARE YOU A PILOT?

Of particular interest to pilots or to-be-pilots is the just released revised book **"Civil Air Regulations and Flight Standards for Pilots".**

Hot off the press, this up-to-the-minute book written by Aero Publishers, Inc. of Los Angeles, reflects the latest changes in regulations and rules applying to all classes of pilots. Included are C. A. R.'s requirements for pilot certification and ratings, sample written exams, air traffic rules, aircraft registration, radio procedures, visual flight rules, services available from FAA facilities and much more.

Copies of this publication are available through book stores, airport supply dealers, or from the publisher.

ORCHIDS

The following letter of personnel commendation has just been received from our Administrator, E. R. Quesada:

"I would like you to extend my commendation of a job well done to the Bureau of Facilities Electronic Maintenance Technicians whose ingenuity and quick action contributed a great deal to the safety of the flying public during a power failure at the Kansas City Airport on December 4, 1959. Their ability to improvise emergency tower communications facilities with the 'means at hand' exemplifies the fine caliber of people serving in our organization.

"The names of the men to whom I refer are Norbert Duelle, Robert Elliot and Robert Popejoy. I am happy that the accomplishments of these men have been made known to all the FAA Family through the article appearing in our February 1960 issue of the official employee publication, FLY-BY."

(EDITOR'S NOTE—This item was first reported in the December issue of FLIGHT LINES.)

AREA BROADCAST

For the benefit of their users, Detroit Flight Service Station recently distributed a most informative information piece to acquaint pilots with such services as flight following, how to change flight plans enroute, pilot reports, flash advisories and concluded with a pitch on why the name change from ATCS to FSS. Nice work, and a most useful service.

FLY-IN AT NAFEC

An invitation is extended to the nation's private and business pilots and aircraft owners to plan in advance to attend the second annual General Aviation "Fly-In" to be held by the Federal Aviation Agency at its National Aviation Facilities Experimental Center at Atlantic City on October 1, 1960.

Columbia, Missouri, Flight Service Station. R. V. DAVIS, FAA, instructing group of Stephens College aviation students.

INTERNATIONAL TV

St. Louis Air Route Traffic Control Center personnel and guests became actors for the day recently—appearing on STL TV Station KPLR.

Prompted by the TV station's interest in the International Cooperation Administration exchange program, in which the FAA participates, ICA personnel presently at the St. Louis ARTCC were featured.

Seen in the photo are: FAA Watch Supervisor STL ARTCC *Frank Hildebrand; Mrs. Hildebrand; Hussan Anwar Mahmoud,* Assistant Chief of Cairo, Egypt, Traffic Control Center; *Sue Carson,* TV show hostess; *Salah Sadek,* Chief of Egyptian Air Traffic Control; *Mrs. Sadek;* and *Kenneth Hildebrand,* Director of Engineering, Station KPLR.

FAA officials on arrival via TWA Boeing 707 Jet from Washington, D. C., accompanying House Interstate and Foreign Commerce Committee here to inspect TWA overhaul and training facilities are (left to right), *Leonard W. Jurden,* Regional Manager; *David D. Thomas,* Director of Bureau of Air Traffic Management; *Robert E. Williams,* Assistant to FAA Administrator; *Oscar Bakke,* Director of Bureau of Flight Standards; and *James Pyle,* Deputy Director of FAA.

Photo shows new Terminal Building and combined Station and Tower, which was commissioned on March 21, at the University of Illinois Airport, Champaign, Ill. DALE WARNER, formerly of Minneapolis/St. Paul International Airport Control Tower, is the new Chief of this facility, which brings to a total of 41 towers or CS Ts currently providing such service in Region 3.

TOASTMASTERS

Left to right CHARLES BAKER, ANF Division; ELDON KAUP, ATM Division; THOMAS DAVIS, General Safety Division; MILTON ZEUNER, Airports Division; and seated — WAYNE KARL, ANF Division;

Wayne Karl, the winner, will compete in the Area Meet to be held March 19, 1960, at the Elks' Club.

WINTER*

Enough's enough!

We are hoping for spring—

late as it may be.

Merlin Keplinger and Earl Swartz receiving Sustained Super Performance Awards from their respective bosses. Left to right: Robert B. Davison, Arthur C. Lybarger, Merlin Keplinger, Earl Swartz, and George D. Smith, Kansas City Center Chief.

FIELD ORGANIZATION STRUCTURE

A recently received Agency Bulletin prescribes the Agency's organization for execution of its programs in the field, exclusive of the Aeronautical Center and National Aviation Facilities Experimental Center. The Bulletin is printed below.

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Regional Office Organization — The organization structure of the headquarters office in Regions 1-6 shall be as follows:

a. Office of the Regional Manager which shall consist of a Regional Manager, an Assistant Regional Manager, a Public Affairs Officer, a Management Analysis Officer and the following staff and service elements:

Audit Services Staff
Emergency Readiness Staff
Security Staff
Accounting Division
Administrative Services Division
Budget Division
Legal Division
Personnel and Training Division

b. Air Traffic Management Field Division No.____

c. Facilities and Materiel Field Division No.____

d. Flight Standards Field Division No.____

e. Aviation Medicine Field Division No.____

The title of each Division listed in paragraphs b, c, d, and e of this section shall include the appropriate Regional number.

As provided previously, authority delegated to Regional Administrators to direct staff and supporting services in all Regions is vested in the Regional Manager. This is continued with respect to all components herein identified as constituting the Office of the Regional Manager.

In the exercise of this authority the Regional Manager is subject to policy and technical guidance from the appropriate Washington Offices and Bureaus and the operational and program control previously exercised by such offices. In Regions 5 and 6 all components of the Regional Office shall operate under the supervision of the Regional Manager is expected to foster coordination and the exchange of information among all field divisions. In addition, he will exercise direct supervision over the elements of the Office of the Regional Manager. All other Divisions in Regions 1-4 shall be under the direct supervision of their respective Washington Bureaus or Office. In all Regions the Regional Manager shall report to the Administrator on all matters within his area of responsibility.

Subordinate Organization — The heads of Washington Bureaus and Offices are authorized to prescribe subordinate structure of their field counterpart elements. This shall be done in writing and a copy filed in the Office of Management Services.

Effective Date — This Bulletin is effective March 1, 1960. All other Orders or instructions or parts thereof heretofore issued that are inconsistent or in conflict herewith are amended or superseded accordingly.

E. R. QUESADA, Administrator

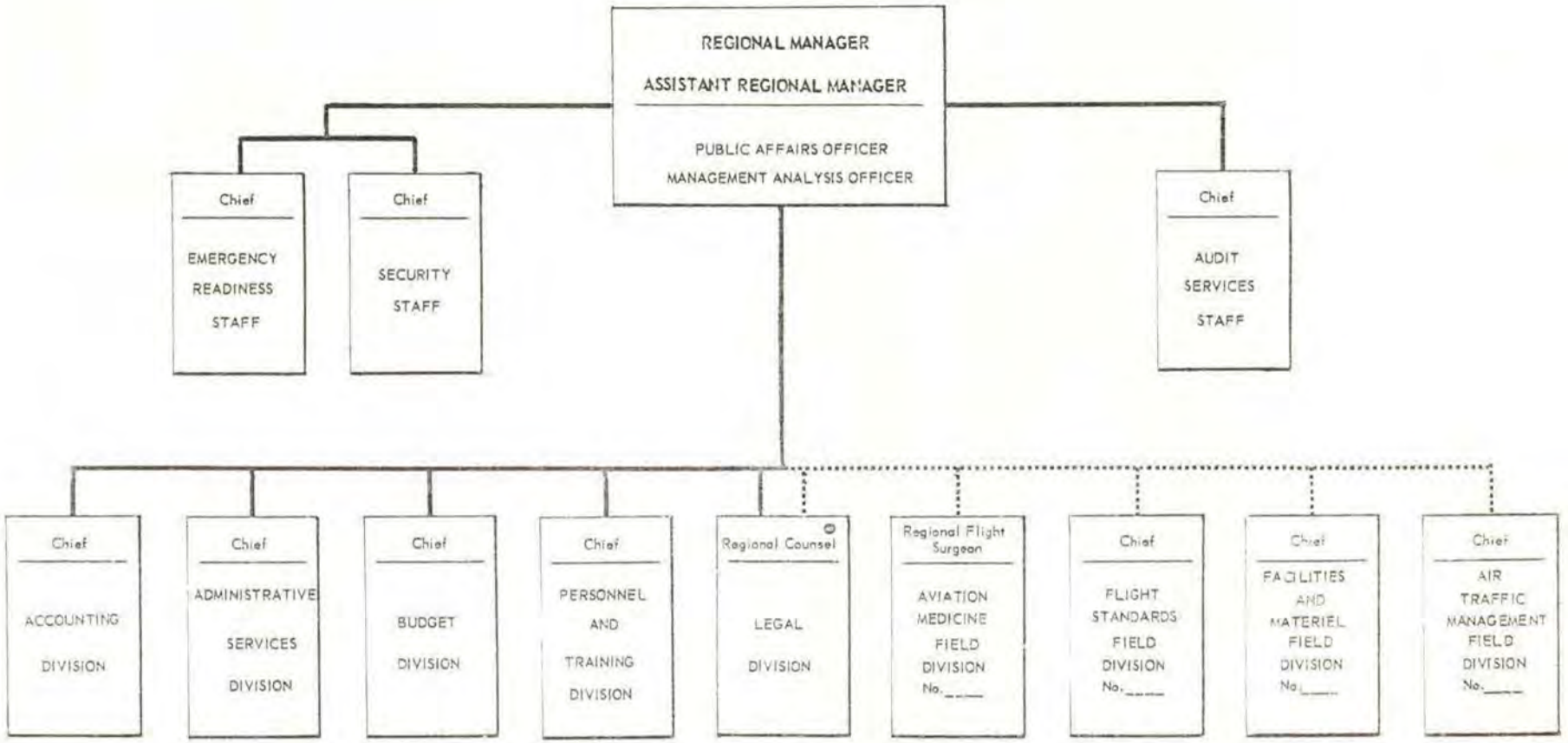
A chart of the Regional Office organization is printed on the opposite page.

AIRCRAFT SERVICE AND FLIGHT INSPECTION BRANCHES TRANSFERRED TO FLIGHT STANDARDS DIVISION

One of the immediate results of the new field organization structure is the transfer of Aircraft Service and Flight Inspection Branches to the Flight Standards Division. This is effective Sunday, March 20, 1960.

FEDERAL AVIATION AGENCY

REGIONAL OFFICE

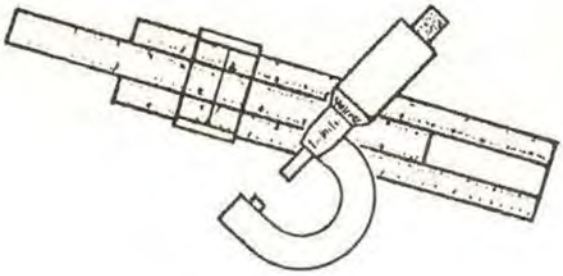


———— *Direct supervision.*

..... *In Regions 1 – 4, the program divisions operate under direction of their respective headquarters Bureau and Office counterparts, but the Regional Manager is expected to foster coordination and exchange of information among all field divisions.*

In Regions 5 and 6 all components operate under the supervision of the Regional Manager.

② *In Regions 1 – 4, a Regional Counsel will supervise those activities for which he is directly responsible to the General Counsel. He will also serve as Chief of the Legal Division in these Regions.*



AIRCRAFT ENGINEERING

Folowing is another article "We Recommend Airworthiness Directives" composed by a very talented writer in the Power Plant Branch of our Division, Mrs. Hulda Dahl, who is also responsible for the preceding articles "We Issue Type Certificates," "We Issue Production Certificates" and "We Issue Supplemental Type Certificates." Watch for future articles written by Mrs. Dahl.

We Recommend Airworthiness Directives

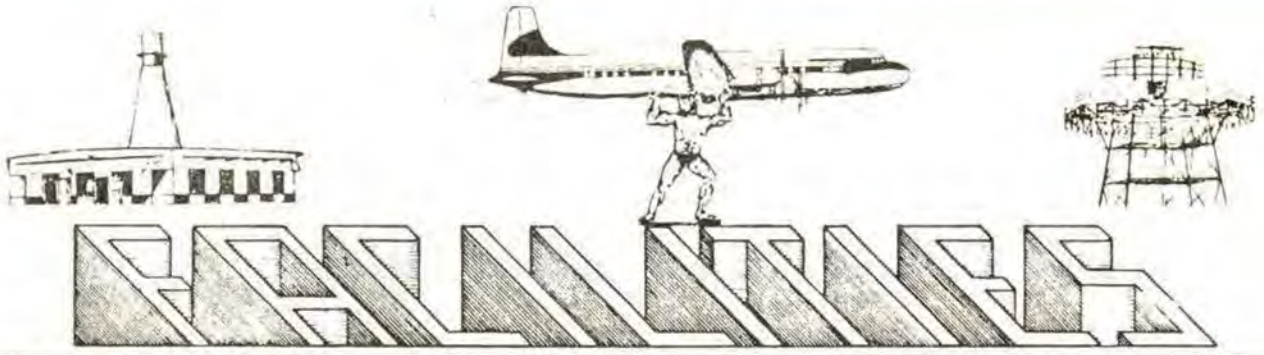
It sometimes happens that an airplane can behave beautifully during its testing program and cause us a lot of trouble after it gets into actual use. In spite of trying to anticipate all the conditions it might encounter after it is sold and delivered, and making sure through evaluations and tests that it is going to be all right, we have it happen every now and then. These are the headaches of our job, aud an even more painful headache to the manufacturer. Usually it is up to him to come up with what we call a "fix" and frequently it takes a big bite out of his profits.

It's the "proof of the pudding" this service experience, but the trouble is that the pudding is usually spread all over the United States and Canada, to say nothing of foreign countries, before it begins to prove itself not so good. Then it is up to us to get the word out to the individual owners in the quickest and most effective method, and that is the Airworthyness Directive sent out of Washington.

If the trouble that has shown up is dangerous enough to cause accidents, we recommend emergency directives that go out by telegraph for a wide distribution which assures that owners will know about it as soon as possible. The directive includes the "fix" and a date by which the fix has to be made.

In the December issue of **Flight Lines** we told you about the new Cessna Model 407 twin-jet executive aircraft. The pictures shown **here** are mock-ups of the 407. Note the sleek lines and easy accessibility into the airplane.

Continued on page 22



A PROFILE

Walt Shedlowe first saw the light of day in Winnipeg, Canada, on May 4, 1917, but since it looked like the cold weather was there to stay, the family moved to Detroit. Before facing the big cruel world, he acquired a Bachelor of Science degree in electrical engineering from Wayne University in 1939.

Being still allergic to exams, he resigned from his first job as Chief Engineer for a technical correspondence school to try his hand as a design engineer with a dental supply firm. In 1941, his first exposure to Government work was as an inspector of Signal Corps radio equipment for the Army Quartermaster Depot in Chicago. Before voluntarily accepting a "position" with the U. S. Army in Sept., 1942, some time was spent with the Detroit Public Lighting Commission as a Power engineer. His Army and USAF "career" ran the gauntlet of numerous service radar schools and included the battles of Camp McDowell (Naperville, Illinois), Miami Beach, Camp Murphy (Palm Beach), Warner Robins Field (Georgia), and a nine month stint at Northwestern University at Evanston, Illinois.

In June 1944, Walt joined the Third Region at Chicago as a P-2 Radio Engineer in the Communications Engineering Branch. After three years of field work installing air navigation and communications aids, the regional office beckoned. So that he would not be too lonely, his wife, Nadine, went to work for the Maintenance Branch in 1948 and eventually ended up working for Bill Godfrey, our present Plant Engineering Branch Chief. In February 1950, he was made Chief of the Electronics Airways Aids Section in the Facilities Engineering Branch.

WALTER J. SHEDLOWE

The appeal of overseas work was stronger than the establishment of VOR's and ILS's or the study of industrial management at Northwestern, so new living quarters were established in the Republic of Panama in January, 1953. As the aeronautical electronics consultant for CAA's Regional Aviation Assistance Group attached to the Foreign Operations Administration, Walt traveled extensively throughout Central and South America participating in the planning, procurement, and establishment of airway radio aids.

Memories that could be forgotten include looking into a machine gun barrel while ascending a ladder to the roof of the Tegucigalpa, Honduras, airport administration building to find a "better" antenna location, (it seems that a local political disturbance had developed during the night) ; low level buzzing of the rugged mountainous coast between Rio de Janerio and Sao Paulo, Brazil, in a C-47 looking for VOR sites. In January 1955, the president of Panama was assassinated approximately one-half mile from the Shedlowe residence and, subsequently, martial law was imposed and a house-to-house search within the area was carried out by the militia. Transfer to Ankara, Turkey, was scheduled for April, 1955, but the best laid plans of mice and men. . . . .!

Having no place to light in Chicago because of the regional consolidation, Walt was assigned to Kansas City in May 1955, as Chief of the Electronics Engineering Section in the old Facilities Establishment Branch. He presently sits in a corresponding slot of the Radar and Communications Engineering Section. With the help of fifteen engineers and three stenographers, the Section is responsible for providing the electronic engineering necessary to modernize, relocate, and establish all of the radar and communications facilities in the Region. Some of the more intensive establishment programs the Section has participated in recently includes air route surveillance long range radar facilities, the new ARTC Center, and a substantial teletype modernization of FAA stations.

Extra curricular activities have included just enough participation in the physical sports to impress his two daughters, Nancy and Karen (7 and 9) at a young and tender age. More recent exertion has been limited to hitching up a newly acquired camp-trailer and taking off for weekend outings. Between Brownie Girl Scout meetings in the recreation room, the most expensive kindling wood in Prairie Village is also being turned out in a basement workshop. Along with being in a group now dickering for a Tri-Pacer light plane, a

current project involves getting up enough intestinal fortitude to take the flight exam for a private pilot's ticket within the next few weeks.

SOUND THE ALARM!

Fire at Eau Claire, Wisc., Municipal Airport

On the afternoon of January 27, a fire in the Airport office and shop building resulted in the destruction of ATCS communication antennas at Eau Claire.

Marvin Royce, ATFO Chief at Eau Claire, reports as follows:

Remains of the Eau Claire, Wisconsin, Airport Office and Shop Building.

"The fire started at about 3:20 P.M., caused by sparks from a welding torch. These sparks ignited the fabric of an airplane which was in the shop for repairs. The fire spread very rapidly through the airplane, and within a few minutes, the gas tank exploded. After that the fire spread to the rest of the building and burned very intensely, being fed by oil, fuel, and dope. As a result, two other airplanes, which were also in the shop, were destroyed.

"The Airport's water system had suffered a failure of the pump during the summer of 1959, and the pump was replaced on an interim basis with a much smaller unit. This was because a new Administration Building will soon be erected in another location on the field, and new water facilities will be provided with that building. Therefore, although there was a fire hydrant less than 100 feet from the burning building, it was useless because of inadequate capacities of the pump. The Fire Department had to lay out 3500 feet of hose in order to obtain enough water to properly fight the fire.

"All of the ATCS VHF receiving antennas were completely destroyed. Even though flames did shoot up around the UHF antennas, all but one of the antennas operated after a thorough cleaning off of the smoke and carbon. The remaining UHF antenna was inoperative because the transmission line was destroyed.

"While the fire was still raging, ATDO-9 was notified by telephone, and arrangements were made immediately to furnish additional help from Wausau, in order to restore the facility to service as soon as possible. Mr. Leroy A. Spear, ES, was dispatched to Eau Clair from the Wausau ATFO, and was on his way to Eau Claire within thirty minutes after ATDO-9 received the notification. Immediately following the extinguishing of the fire, the help of ATM personnel, Allard and Kampa, was secured to start fabricating emergency antennas. These antennas were made by folding back the shield of RG-8/U transmission lines. All VHF antennas were back in service by 6:30 PM.

"During the next morning, a new transmission line was made up for the 255.4 Mc. antenna, and this resulted in the restoration of service on all frequencies. However, about noon that day, the City requested that we remove the remaining antennas from the roof of the damaged building, because it was planned to demolish the entire building. Therefore it was necessary to relocate the temporary antennas along the side of the ATCS building. These make-shift antennas, although quite close to the ground, worked surprisingly well.

The Regional Office was notified by ATDO-9 within a few minutes after receipt of the information from Mr. Royce. Immediate arrangements were made for shipping the replacement antennas from OMD, and an O & R crew was scheduled to arrive the next day to begin work on permanent antenna replacement.

Below, LEROY A. SPEAR removing remains of UHF antennas from damaged building at Eau Claire.

Messrs. Royce, Allard, Kampa, and Spear deserve commendations for their part in expediting the return of this facility to service.

LINCOLN REPORTS

After a long break, here is another bit from ATFO No. 51. Lincoln, Nebraska, as reported by Richard Simonson.

The new CA-1716, 2-position console, used for air-ground contact, is now operating at the Lincoln ATC Station. We all think that Mr. Baudler and his crew did a wonderful installation job on the console, four new TV-6 Transmitters and associated equipment.

The Raymond, Nebraska, TACAN with TMC Monitor was commissioned during December and ever since the TMC has proceeded to prove to us that it has over 500 tubes and cables running so many places you need a map. The picture shows two racks of the TMC with doors open, which should make it obvious this is a real complicated piece of equipment. This new facility necessitated holding a training school so Mr. Yeates of the Omaha District Office held two weeks of classes for those technicians that required training.

As for technicians, we have plenty but they don't stay long. We get all the men assigned to the Lincoln RAPCON before they are sent to Oklahoma City Radar School and have been training some for the new Sector at Pawnee City, Nebraska. This new Sector will relieve this ATFOR of much traveling.

We have had a fair amount of snow for this section of the country, plenty of trucks stuck and several long walks when the drifts were too deep.

Oklahoma City has two of our men, as usual, including the SES, and more slated to go."

LEAVE IT TO THE GIRLS

All Flight Inspection District Offices maintain direct radio communications with Flight Inspection aircraft within a forty-mile radius. The FIDO stenographers are the principal ground-to-air communicators (although not in their job descriptions). This activity was put to additional use recently when an OKC High Altitude Flight Inspection B-57 aircraft was working in the area and planned to land at the Battle Creek ANG Base to obtain oxygen and jet fuel which service is available only at AF/ANG bases. FIDO contact with this aircraft determined the purpose for landing at BTL and informed him that such services were not available on Mondays.

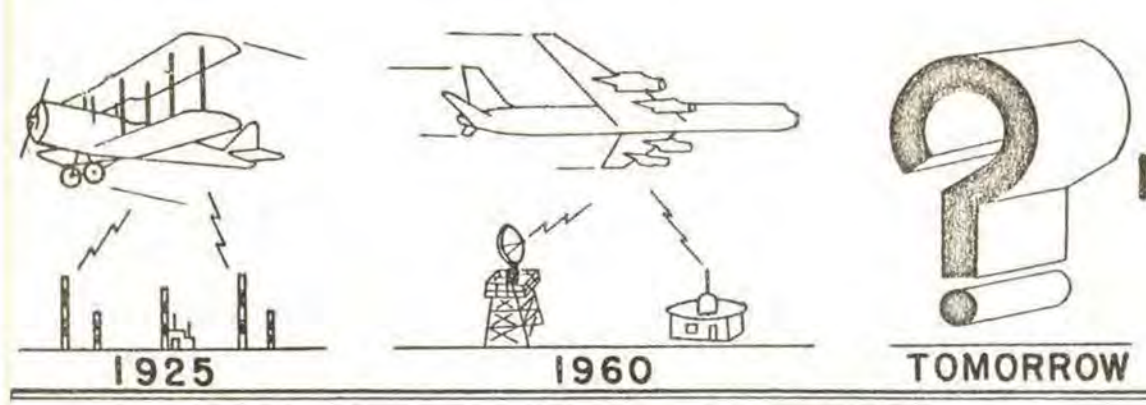
The pilot was thus able to change the flight plan and land at Selfridge AF Base where the services were immediately available and he was able to continue his work in the Madison area on that day. Were this seno-communicator not available, the jet aircraft and crew would probably have been detained overnight at BTL until fuel became available.

Indeed our girls must be versatile!

The Minneapolis FIDO reports that their 16mm movie film and development costs are gratis. It seems that some flight checks require slow motion color movies of approach light systems. The finished film is being returned to the FIDO with a letter of apology stating that "there is nothing on the film except a lot of white and colored lights". They enclose a free roll of film and charge nothing for the developing. The FIDO boys no not know exactly what their next step should be, but they report their consciences do hurt a little.

HAPPY THOUGHT

If you've been putting it off—don't forget to complete your income tax homework by April 15.



AIR TRAFFIC MANAGEMENT

"FAA's MOST CHALLENGING MISSION"

This month our contribution to FLIGHT LINES is going to be different, by necessity. It was brought about by our absence February 7-19, to attend the FAA Executive School at Oklahoma City, and again during the period February 28 to March 4, to attend an Air Traffic Management Division Chief's Conference in Washington, during which period of time most of the news gathering and writeup of FLIGHT LINES material for this issue had to take place. In this issue, therefore, the Air Traffic Management section will carry an article submitted from the field, and we are thankful that it became available for use at this time.

We have wanted for some time to obtain items from field facilities which could be used as feature material, to supplement the bits and pieces of information we have collected to make up the ATM section, because we feel that personnel in the field are generally interested in what other people in the field think, do, and say. Last issue, you may recall, contained a picture of the Detroit Center taken back in the "early days" of 1937, through the courtesy of Glenn Nash, who supplied it from his personal file. We also knew that the Detroit Center has maintained a historical record of their facility throughout the years since it was established, and has recorded all of the personnel who have worked there and moved on to other positions in CAA/FAA, or entered other fields of endeavor. With this in mind, we felt that they might be willing to offer an article for publication in FLIGHT LINES which would trace and describe the evolution and development of their facility from the date it was established to the present time. Mr. Clay Hedges, the Center Chief, agreed to have such an article written and it is to Mr. James A. Holtsclaw (ATCS/C, GS-12) that we want to accord full recognition for the excellent job he has done in compiling and correlating the material in the article which follows. We think it is interesting and informative, and it should be particularly so to those many personnel now in our various facilities who have entered on duty within the past few years, since they have not had the opportunity of personally witnessing and taking part in the evolution of the system of Federal Airways, Air Traffic Control and Flight Service facilities and operations as we know them today.

In reading Mr. James Holtsclaw's article, it will become readily apparent that "it was not always so." This may also allow some of our other personnel who are old in experience, if not in age, an opportunity to reflect on the many changes and developments that have taken place over the years and, perhaps, encourage them to sit down and write similar articles which compare the "then" and "now" facilities they are personally familiar with. We will welcome any such material submitted for publication in FLIGHT LINES—so how about giving it some thought?

In the next issue of FLIGHT LINES, we plan to give the field some information on our ATM organization and the way of doing things that will be put into effect in the near future. Included in this will be proposed changes in Regional boundaries, delegation of responsibilities to the field which have heretofore been handled in the Regional Offices, and other matters that may be of interest and will affect people in the field facilities. These matters were discussed at the ATM Division Chiefs' Conference in Washington during the period February 29 to March 4, 1960.

G. W. Kriske, KC-500

The History And Evolution Of The Detroit Air Route Traffic Control Center

The Detroit Center was commissioned August 31, 1936. It was the fourth Air Traffic Control Center, closely following the inauguration of air traffic control between New York, Cleveland, and Chicago in July of 1936. Actual control of air traffic began on September 23, 1936. The intervening period was used for training purposes and making preparations for active control. The first instrument weather conditions under which control was exercised occurred October 31, 1936.

The original center was located on the second floor at the southwest end of the north hanger at Wayne County Airport (now called Detroit Metropolitan Wayne County Airport). The center of that day bore little resemblance to the present one. The physical layout, methods of control, communications facilities, and personnel staffing of today differ from the early equivalent almost as much as the aircraft of 1960 differ from the relatively slow aircraft of 1936. The early day center first operated only 16 hours a day and it was not until November 15, 1937, that the Detroit Center went on a 24-hour operation. Mr. Harry D. Copeland was the "Manager" (as the Chief was then called) of the Detroit Center at its beginning. Two of the original controllers are still in the FAA—Mr. Kenneth Matucha, now serving in Pakistan with the I. C. A., and Mr. Jack V. Tighe, who is Assistant to the Deputy Administrator of FAA, Mr. James T. Pyle, in the Washington Office. Other early controllers were Mr. D. D. Thomas, now Director of the Bureau of Air Traffic Management, and Mr. Chester Church, presently Chief of the Phoenix, Arizona, Center.

The years which elapsed from the center's beginning until World War II were years of very gradual increase in both traffic volume and size of the area controlled. Most of the IFR traffic consisted of military and commercial DC-3s, Boeing B-247s, and Lockheed 10s. The airway structure was initially, of course, dependent upon low frequency NAVAIDs only and consisted of the present. Red 12 (east-west), Red 20 (north-south), and Green 2 (east-west) civil airways. Airports utilized in and around Detroit were Detroit City, Ford, Stinson, Wayne County, Grosse Isle, and Windsor.

By 1940, the center had grown to two sectors with attached "wings" for assistant controllers to work at. Mr. Copland left Detroit for Ft. Worth, Texas, in June and Mr. M. J. Sakole, now in the Field Operations Division (BATM), Washington, was appointed Center Chief. Personnel complement at this time consisted of the Center Chief, one Senior, five controllers, seven assistant controllers, and one clerk-stenographer. The strip holders during this era were big and bulky, measuring about two by 14 inches, and were not molded as are today's holders. They were metal stampings and every time a controller might slam one down hard, it was sure to break or bend in the middle. The average controller was working 44 to 48 hours per week, rotating shifts as is done today, with the pre-war salary of $2900.00 per annum (CAF 8) for controllers and $2300.00 (CAF 6) for assistant controllers.

In line with expanding national defense needs, the U. S. Army assumed operational jurisdiction and control of Wayne County Airport July 10, 1941. An enormous war-born increase in aircraft operations began to affect all centers then in existence. Additional centers were commissioned in rapid succession until complete traffic control coverage of the nation's civil airways was accomplished. In addition, Canadian traffic control was being inaugurated. The Toronto Centre was commissioned January 15, 1942. The same year saw an expansion of the Detroit Center quarters and landline facilities. A good day's traffic at this time consisted of 124 operations. During this same time however, it must be remembered that full instrument approaches under the best circumstances were requiring 15 to 20 minutes per approach so that a relatively small number of aircraft could tie up an entire area in IFR weather conditions.

The war years were hectic in the field of traffic control, just as they were in many another ordinarily smooth-running business. They were years which brought painful recognition of system deficiencies and needed improvements. The job at hand had to be done and the system (no matter how deficient) was credited with the handling of over 57,000,000 aircraft movements during the war. At the Detroit Center, with the loss of many male controllers and assistant controllers to the military services, 32 women were hired as assistant controllers and

DTW Center 1938

"A Positions DTW Center 1960

"D" Positions

worked as such throughout the entire war years. The big task of that period for the Detroit Center was the numerous military aircraft movements of the Third Ferrying Command at Wayne County Airport (or Romulus Air Base), which flew B-24s from the Willow Run Bomber Plant at Ypsilanti to overseas bases, plus handling flight testing of these same aircraft before the ferrying missions took place. Certain improvements in facilities and procedures were, of course, made during this period. Plans were being formulated—approach control was in an experimental stage, as well as numerous other traffic control aids which are now common.

In June of 1945, Mr. Allen Taylor (now area Supervisor, Washington) assumed duties as Center Chief and had such present day Detroit Center personnel working with him as controllers J. J. Bromley, Carl Hayward, and Fred Tanner. Mr. Ray Ballard (now working with Civil Defense), R. Waligora (Watch Supervisor, Phoenix Center), and Howard Coyne (Area Supervisor, Cleveland) were also among the controllers at this time. In 1947, with the general return to a peace-time economy, the way was clear to turn many plans into reality. In the Detroit area, as well as everywhere, airway structures were modified and improved by changes in the patterns formed by the navigational aids, by installing additional aids, or by modifications to existing aids. The low frequency air navigation system was still primary, but important changes were taking place. The first (and only) VAR in the Detroit area was commissioned at Salem, Michigan. ILS systems were being installed at a number of airports throughout the area.

Locally, the Willow Run and Wayne County Airports were being returned to civilian use and control. The air carriers, who had conducted their operation during the war out of Detroit City Airport, moved their operations to Willow Run with the innovation of the DC-4 and the other four engine aircraft to follow. Approach control was inaugurated at Willow Run, Flint, Lansing, Grand Rapids, Muskegon, Battle Creek, and Detroit City Airport. Plans were being made for new center quarters and improved equipment and facilities. Direct air/ground radio communication between center and pilot became operational and constituted an aid highly instrumental in achieving reductions in en route delays.

Mr. Howard Coyne took over the reins as Center Chief in April, 1948, after first having served as clerk-stenographer at Detroit Center as early as 1939, then receiving air traffic control training in the Cincinatti Center and later returning to the Detroit Center. Working with him at this time was our present Center Chief, Mr. Clay W. Hedges.

On August 15, 1949, the present center quarters were occupied. The center now had grown from its original two sectors in its new quarters, plus three controller-to-pilot air/ground frequencies. Along with the increase in size, the center also added its first weather teletypewriter circuit to provide reports on current observations at all primary airports in the area. Next, the Air Movement Identification Section (AMIS) was inaugurated with Mr. Ray Ballard serving as the first assistant Chief, AMIS. Mr. Ballard was followed by Mr. Ed Basel in 1955, Mr. E. Underwood in 1956, and the present Assistant Chief, Security, is Mr. Robert Reddick. (Both Messrs. Ed Basel and Ed Underwood are now members of the Procedures and Regulations Division, BATM, Washington, D. C.) Another navigational aid came along in 1952; this time seemingly the answer to many problems, with the commissioning of the Detroit Omni in conjunction with the Ford Marker. Later, the Salem VAR was decommissioned and the Detroit Omni was moved to Salem to become the first of numerous omnis now spotting the Detroit Area. Willow Run approach control installed ASR and was operational with the first arrival radar service in this area in 1953 for inbound aircraft to the Willow Run Airport. Instrument approach times were now reduced from the former 10 to 15 minutes down to three minutes or less.

On November 5, 1956, Mr. Harley E. Shotliff arrived at Detroit from the Chicago Center to take over as Center Chief. At about the same time, as the result of a significant CAA budget increase, the Detroit Center started to undergo one of its greatest changes, both in handling air traffic more expeditiously and in giving the controller more tools with which to work. The ground work was laid for a number of air/ground peripheral sites and extended landlines to adjacent areas. IFR air traffiic had continued to increase steadily. The strip postings for 1956 showed a 100 per cent increase over 1953 and a 500 per cent increase over 1949, the year the present center was built and was considered adequate to meet our needs for several years. During 1957, the Detroit terminal area complex of airways and IFR routes underwent a complete change. Willow Run inaugurated departure radar service and, with the Detroit Center using preferential airways for the first time, the increased traffic (even at its peak) could be handled with a very minimum of delays. Two new hi-altitude sectors were also introduced at this time.

By spring of 1958, Detroit had complete peripheral air/ground coverage over the control area. A FLIDAP position was installed which allowed adjacent centers to forward estimates and flight plans to one central location in the center, as well as permiting the local agencies to do the same. The training department, headed by the Assistant Chief, Training, Mr. Fred Tanner, moved from its very small quarters in the center

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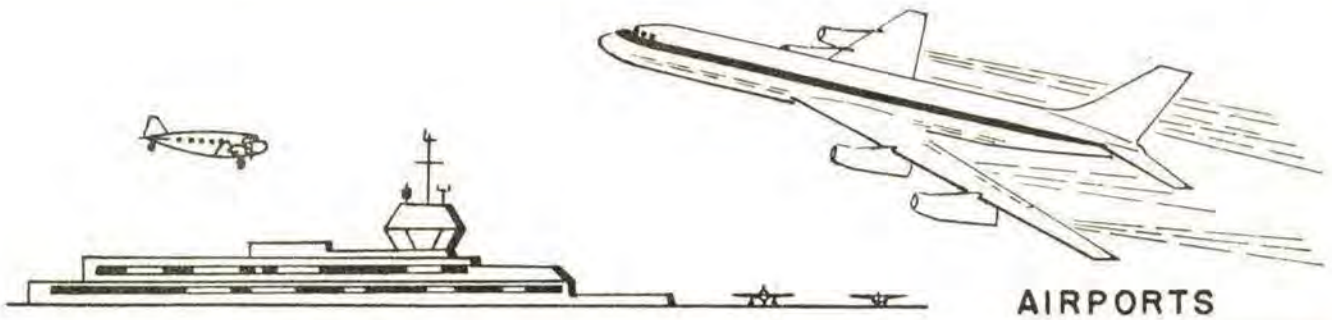


AIRPORTS DIVISION

District II Office Move

The office of the District Airport Engineer, District II, Lincoln, Nebraska, was moved a distance of over three miles from downtown Lincoln to a new location at 3910 South Street. The move was successfully accomplished prior to January 1, 1960 despite the official pressure of deadlines for the 1961 Federal Aid Airport Program and the unofficial pressures of the holiday season. Fortunately the move was made just before winter storms and heavy snows blanketed the Lincoln area. The new office, located in southeast Lincoln at the intersection of South Street and Normal Boulevard, is provided with ample parking space for office personnel and visitors. The availability of car parking space to date, however, has been limited to reduced areas from which snow drifts can be cleared.

1961 Federal Aid Airport Program

District II received requests for Federal aid in airport development under the 1961 Federal Aid Airport Program from twenty-seven municipalities in Iowa, Nebraska and South Dakota. To meet the deadline dates many regular and overtime hours were spent by District personnel in the review and analysis of requests for aid and the preparation of recommendations for program action. Upon completion of the District's recommendations and the conclusion of Regional Programming Conference, District personnel indulged in a change of pace and relaxation in the form of a weekend without overtime hours. Included in weekend activities was a winter-time barbecue scheduled by the District Airport Engineer in appreciation of the extra work performed by District personnel in connection with the formulation of the 1961 Federal Aid Airport Program.

Omaha Airport Improvements

The Omaha Airport Authority received bids for the construction of a new airport administration building on February 10, 1960. The new building, containing a total of approximately 85,000 sq. ft., will be located 1200 ft. north of the present facilities. Building construction at an estimated cost of $1,600,000, is scheduled to begin this coming spring and the time allowance for completion is 450 calendar days.

Bids for concurrent construction of associated apron and taxiways and other support facilities was received on March 3, 1960. The new apron expansion will accommodate a total of thirteen gate positions. Associated support facilities are included in a Federal-aid project at an estimated cost of $250,000.

The widening of taxiways, taxiway shoulder stabilization and runway blast pads are proposed for construction under the 1961 Federal Aid Program to accomodate jet aircraft. **United Air Lines** will begin initial jet aircraft service to Omaha in August of this year.

Des Moines Airport Improvements

Airport improvements being carried out under Federal Aid Airport Project at Des Moines are expected to be completed within a period of sixty days after construction operations are resumed in the spring. Improvements as a result of this project include pavement of a new 5,000 ft. NE/SW runway, an airport taxiway system and apron expansion; modifications and expansion of the airport administration building; installation of a taxiway lighting system; additions to the runway lighting system; expansion and improvement of auto parking areas and clearance of obstructions to aerial approaches to the runways. The estimated cost of work included in this project is $2,947,000.

Airports District Office Staff at Lincoln, Nebraska. Left to right: W. B. Boucher, DAE; Airport Engineers W. J. Koliha, R. P. Smith and Victor Wink; Secretary Geraldine Knotek; Engineer N. C. Cole and Wilma Ackermann, stenographer.

The City of Des Moines intends to carry out a further expansion of the airport administration building during fiscal 1961 to provide additional building space for airlines, the Weather Bureau and the Federal Aviation Agency.

Ottumwa Granted Title

Since World War II and until September 16, 1957, the former Naval Air Station at Ottumwa, Iowa, was operated as a municipal airport by the City of Ottumwa under the terms of a lease granted by the Navy's Bureau of Yards and Docks. On September 16, 1957 title to all land areas was returned to the City under a reverter clause but title to all buildings and other improvements was retained by the United States for a period of two years pending the comple-

tion of disposal actions. Subsequently all retained improvements were transferred to the Air Force for use in the development of a missile tracking center except for the airport flight facilities and specified buildings required for civil aviation and in the operation of the municipal airport. The City has granted a lease of existing building sites required for Air Force purposes and is in the process of obtaining title to building areas and flight facility improvements required for municipal airport purposes under a declaration of surplus property being handled by General Services Administration. The City of Ottumwa now owns and controls all land areas required for civil airport purposes. Upon completion of the disposal of surplus property by GSA, the City will also own and control the existing airport flight facilities, buildings and other improvements essential to the operation and maintenance of the airport. Improvements in existing facilities are required to meet the current needs for air carrier service by Ozark Airlines and of other civil aviation activity. Such improvements include runway pavement overlays, installation of new runway lighting systems, airport drainage rehabilitation and administration building modifications. The City proposes to carry out required improvements during fiscal year 1961 and has requested financial aid under the 1961 Federal Aid Airport Program.

We are indebted to WILLIAM B. BOUCHER, DAE Lincoln, Nebraska, for this month's report on doing in =2.

Continued from page 14

When the trouble does not require immediate action because it is not so serious, the Airworthiness Directive goes out in the regular way; in the mail, on an oblong card which can conveniently be posted on bulletin boards in airports and flying services. It calls attention to an unsatisfactory condition, shows how it can be corrected, and tells how long it will be before the FAA will expect all fixes to be made.

The various deficiencies that develop in service can result from many causes — unusual operations, materials which do not stand up as well as they should under certain climatic or operating conditions, etc., etc. It doesn't have to be much. The old fable of the horse-shoe-nail applies double strength to these assemblies of metal, wood and fabric that fly. A loose nut can cause a fatal accident !

The remarkable thing about this young transportation giant we call aviation is not that service experience shows up deficiencies, but that it shows up no more than it does. We deplore the accidents which sometimes happen before we become aware of certain deficiencies, but we are grateful that they are so few. Through the medium of Airworthyness Directives, control is exercised to prevent accidents and keep the flying public informed of all changes and improvements to airplanes in service which will make them perform more safely and efficiently.

WELCOME

The Division extends a hearty welcome to Henry E. Nauert, Aeronautical Design Evaluation Engineer in our Airframe and Equipment Branch. Mr. Nauert was formerly with Beech Aircraft Corporation where he was employed approximately six and one-half years as a Flutter and Dynamics Engineer. Mr. Ronald Puckett, Engineering Flight Test Inspector, is also a very welcome addition to the Division. Mr. Puckett was transferred from the Flight Test Branch of Region Four, where he was stationed at AEDO No. 46, Seattle, Washington.

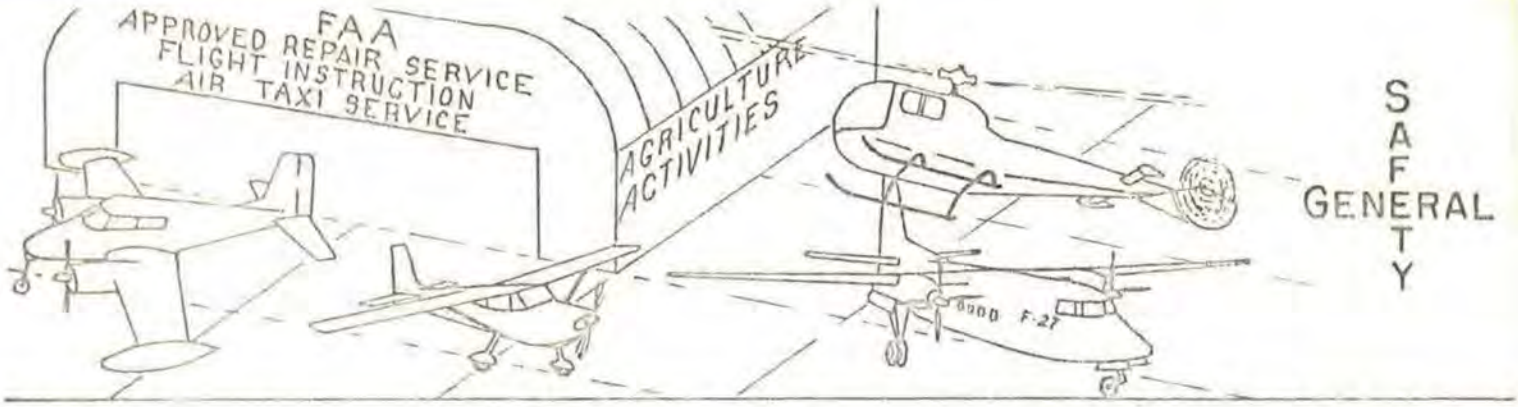
Continued from page 20

to separate quarters in the north hanger on the Wayne County Airport. This move gave Mr. Tanner the facilities in which to develop. This has since become one of the best training programs in the air traffic control system. Approximately 350 people have gone through the training program at Detroit and only a very small percentage of today's operational people in the center have not received training of some type from Mr. Tanner's Proficiency Development Department. Also, in this same year, the administrative offices of the center were moved from the south end to the north end of the building the center occupies, which provided more room for the expanding number of administrative personnel. By this time, the administrative staff contained two secretaries, plus the Administrative Assistant, with another two secretaries being added the following year.

By the end of 1958, Detroit Center added another link in the air traffic control chain by inaugurating long range radar service, utilizing ARSR equipment and VG scopes. The center now consisted of 11 sectors, plus radar and air/ground service.

At present, the Center Chief is Mr. Clay W. Hedges, who was appointed following Mr. Shotliff's promotion to Detroit Air Traffic Supervisor in February 1959. Mr. Hedges' staff consists of: Deputy Chief, Mr. Keith Muir; Assistant Chief - Operations, Mr. Norman L. Kruse; Assistant Chief - Planning, Mr. Sidney I. Rose; Assistant Chief - Training, Mr. Fredrick P. Tanner; Assistant Chief - Security, Mr. Robert H. Reddick.

The year 1959 saw the Detroit Center handle the greatest number of aircraft ever, yet delays were the lowest of any past period. On route radar service was added, as well as continuing the already established radar service to departing aircraft. The center has grown from its original staff of five controllers in 1936 to its present complement of 259 employees; and of the future — who can say?



Fifteen Years Ago . . .

Fifteen years ago the first issue of the V Regionaire was published. That was the first paper of this type to be published in this Region. At that time, Warren W. Smith was Chief of the General Inspection Branch, and George Ireland, present Chief, General Safety Division, was fighting the war. Lee Covert, General Operations Branch Chief, had left the Wichita District Office to fly for TWA. He returned to CAA in Fort Worth after two years' attempting to straighten out TWA. Dave Detamore was in the District Office at Kansas City. Tom Davis was in the General Inspection District office at Concord, New Hampshire. Phil Janes, our newest member of the RO gang, was in the Navy at Terminal Island, San Pedro. L. R. Eichem, General Maintenance Branch Chief, was in Atlanta, Jim Christopher was still fighting the war. Pres Kirk was in the Lincoln General Inspection Office, and Ronnie Whittemore, our new EE man was on Guam. Helen Leighow, our Administrative Assistant, was Chief Clerk of the Certificate Unit, and incidentally, the only one of the 1945 crew still here. So much for the Regional Office! As for the districts, Inspector Troxell was in Des Moines, Colton in St. Louis and Schultz in Wichita. What is now Region Three was Region Five, and in the consolidation we lost part of old Region 5 to Region 4, and we gained much of old Region 3. We have not attempted to mention everybody, but if you were with us at that time, let us know, and you might get your name in the paper in the next issue or so, as we will probably be reminiscing from time to time.

NEWS FROM THE DISTRICT OFFICES

Chet Carver, Springfield, Missouri, sends us information that an old aircraft museum is being established near Leasburg, Missouri. Already, they have a Curtis Robin, Aeronca C-3, Waco Model 10, Travelair Model 1200, Travelair 12-Q, Bird (bi-plane), American Eagle (bi-plane) shortnosed, Curtiss Wright Jr. (Pusher), Heath Model CN-40 (Monoplane) and Waco Model 9.

All the DO's are preparing for a record number of applicants for flight tests in the near future. On March 16, 1960, new instrument requirements are being added to the private and commercial flight tests. Past experience has shown that whenever requirements for any of our examinations are changed, there is a tremendous pressure on the part of industry to get as many of their applicants through the examination prior to the change-over deadline. The changes effective March 16 require all applicants for private and commercial flight tests to have instrument flight experience and is designed primarily to reduce the number of accidents caused by attempts to fly in bad weather.

Purdue University (Lafayette, Indiana) experimental class instruction via TV transmission through a relay station carried in a DC-6 is progressing. Two DC-6's have been purchased and Westinghouse will make the installations for the TV portion. We understand that maintenance will be under contract and possibly one qualified crew during the first phases of this program. In addition to enlarging the airport to take care of this operation, a new hangar has been approved for housing this equipment. The program calls for having this in operation on an experimental basis by the start of the fall term, with the idea of implementing the full program for the second term of the 1960-61 year.

OPERATION "Ditto"

Now it can be told. Recently a summit meeting of six GSDO secretaries was held in Kansas City. The purpose of this meeting, while classified as "Top Secret", was to develop a standardized procedure for running a District Office. The meeting was headed by our boss, Mr. Ireland, assisted by Helen Leighow of the RO and Barbara Noe from the Kansas City, Kansas District Office. The other girls who attended were: Ida Travis(who came very well "prepared" but had to buy her clothes after she got here) from Des Moines; Cleo Nemer (who knows a good place to live when she moves away from it) from Minneapolis; Hazel, "take me to your leader" Fox, Cha Cha Cha Specialist from Milwaukee; beautiful Joan Regelbrugge from the "beautiful Fox River Valley", West Chicago, Illinois; Queene Snider from Wichita (where nothing exciting ever happens). They met one day with George Ireland, Division Chief, who charged them with the responsibility of coming up with something constructive that could be used in all district offices. Helen Leighow then took them in tow and they proceeded to the GSDO in Fairfax to ponder and produce. The results are, as Barbara Noe puts it: "The session was not long under way 'til it was all too clear that the fella who said, 'East is East and West is West and ne'er the 'twain shall meet', sure 'nuff knew what he was talking about

(as it was obvious that none of us were on the same 'twack'). But as the days wore on and the fighting spirit wore out, there was a meeting of the minds which we hope will disprove the old adage that nothing much is ever accomplished at meetings. Although they worked hard and accomplished a great deal (the results of which will soon be forthcoming), they also had a lot of fun running around nights in Helen's trusty little Rambler seeing the sights in Greater Kansas City. They were here just a week too early to see the Plaza Christmas lights and when they went to the Art Gallery, it was closed, so they took in one of the more lively, but less "arty" joints. (Jungle Club?) They even got up one morning before breakfast and had pancakes at one of our newest pancake houses—which is not conducive to small waist lines. In fact, they didn't worry too much about waist lines after working hours, even though the discussions about business continued, so you see, this meeting was proof that our girls take their work very seriously.

LAST WORD IN AIR-TRAVEL LUXURY

As a reminder that long-range airline routes or creature comforts dispensed aloft are no recent innovations, we offer the photograph of the 32 passenger aircraft which was being used on the London-Cape Town and London-Calcutta routes. It was taken in 1929 by Joe McLaughlin, KC-461, at Croyden Airdrome, London prior to a chartered flight over London — arranged for a group of Illinois Eagle Scouts by an Illinois Industrial concern having a branch plant in London.

He reports that the steward explained that full course meals and vintage wines were served on the scheduled flights but that neither were offered to the Scouts on that flight. The interior was fully panelled and seats were deep and soft.

Operations were a combination of VFR plus dead reckoning, with night time layovers enroute. Radio was available for CW communications only.

Not speedy, perhaps, in terms of present day standards, but what-the-heck, with that type of service, getting there was half the fun.

CART BEFORE THE HORSE

Answers to Radiological Problems

1—7200 feet.

2—Solution: From fig. 8.35a, the exposure dose from initial gamma radiation received at a distance of 1.5 miles from a 1-kiloton air burst is 0.1 or $(1x10^{-1})$ roentgen. The scaling factor for 15 negatons is found from fig. 8.35b to be 300,000 or $(3x10^{5})$. Hence, the gamma ray dose in the case specified is, $(3x10^{5}) X (1x10^{-1}) = 3x10^{4}$ or 30,000 roentgens.

Employee		Date of Birth		
Harry Faa		12/31/58		
Height	Weight	Hair	Eyes	Card No.
Short	Heavy	Indeed!	Crossed	

INSTRUCTIONS

1. EMPLOYEE. Complete, with typewriter, if available, otherwise print, all items of this Application Form FAA-1708 except the "Area" block. Sign in proper signature block and return this application to your supervisor. Take no action on the receipt portion of the form.

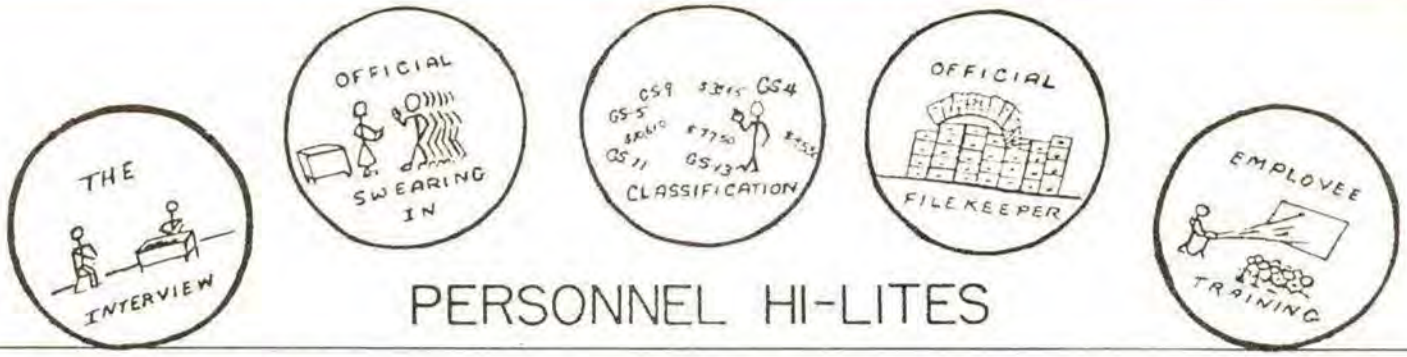
2. SUPERVISOR. (Facility Chief or Head of Office in field, Branch Chief or higher in the Regional offic "Authorizing Officer's Signature" block. After checking to insure that all items have been completed and instructions followed, return the application form (including receipt portion) to the Regional office, KC-20.

Note. Do not forward photographs with this application. They will be requested at the time the Identification Card, Form FAA-2680 is forwarded for signature by the applicant.

Contrary to instructions, the above employee sent his picture with his application rather than holding it to submit along with the ID card when it is sent to him for his signature. However, since he is a good employee and supervisor, (we understand he is being recommended for an outstanding performance rating) we don't want to hurt his feelings by sending it back to him.

Seriously, the applications for the new FAA ID cards are coming in thick and fast. At the moment, we are awaiting some further clarifying instructions from the Washington office. Then we'll start the job of typing the ID cards and sending them out for signatures. After the employee signs the ID card he will return it, with two pictures, to the Regional office. The pictures will be mounted, one on the ID card, the other on the application card. The ID will then be laminated and returned with the receipt, to the employee. The employee will then sign the receipt, surrender his old ID card and send it and the receipt to the Regional Office.

With about 5,000 applications, ID cards, photos and receipts to shuffle back and forth, Operation ID will necessarily be slow, so don't expect your new cards tomorrow. And please, don't ask that yours be given special handling — that would really throw us.



PERSONNEL HI-LITES

Personnel attending Omaha Supervisory Management Course Feb. 29-March 4, 1960, Left to right: seated — *Frank Stifanek, Delbert Myers, Elwin Newell, Bonnie Baker, Russell Kolkenbeutel, David Roberts;* standing — *Joseph Connell, John Robbins, Elmer Gerfen, Gordon Smith, Joe Crees, Charles Siever, Don Lowrey, James Townsend, Emery Rodabaugh, Richard Robinson, Karl Hemsath, Leonard Gavin, and B. M. Anderson,* Training Officer.

Employee Development Officers **Cleo A. Brock** and **Bernard M. Anderson,** gave a 40-hour Management Course at the Rome Hotel, Omaha, Nebraska, February 29 to March 4, 1960. Instruction included: Responsibility of a Supervisor—2 hours; Work Improvement—6 hours; Production — 6 hours; Training — 8 hours; Employee Relations — 16 hours, and Leadership through Self-Improvement—2 hours. Seventeen Supervisory Electronics Maintenance Technicians were in attendance from North Dakota, South Dakota, Iowa, Nebraska, and Kansas. The Chiefs of the Omaha RAPCON and Flight Service Station participated in this week long course.

DIRECTING WORK

Direction is that vital step between preparation and actual operation; it is the issuing of instructions and otherwise indicating to subordinates what should be done.

Every instruction should possess three basic features: (1) compliance should be reasonable; (2) the instruction should be complete as to what is to be done, and when; and (3) it should be clear to the person receiving it. Moreover, at least the main points of an instruction should be written when several individuals are involved, execution extends over a long period of time, the subject matter is complex and detailed, or action of major importance is involved. Once an instruction is issued, care should be taken to see that it is carried out, or it should be countermanded.

The process of direction can be greatly simplified by establishing standard practices, for then an instruction need cover only new parts of the plan, such as when or how much. Indoctrination also contributes to clear understanding of instructions, and is especially significant if authority has been decentralized. Consequently, direction should start with the development of desirable work habits and attitudes.

Explaining why an instruction is being issued is generally desirable. This leads to better understanding and contributes to morale. Consultative direction goes even further and lets the subordinate participate in the planning and formulation of the instruction itself. Such consultation usually improves cooperation, aids in planning, minimizes bossing, and helps in executive development. However, if consultative direction is used, care must be taken that it does not result in fuzzy directions or insubordination. Neither explanations of **"why"** nor consultative direction should be carried to the extreme; they involve time and expense, and on minor matters or when subordinates lack interest this more elaborate direction is unwarranted.

* * * *

—William H. Newman, ADMINISTRATIVE ACTION: The Techniques of Organization and Management. 1951, Prentice-Hall, Inc., Englewood Cliffs, N. J.

RADIOLOGICAL PROBLEMS

The answers to the problems can be found in **"The Effects of Nuclear Weapons"**. The page and paragraph number are given in parenthesis following the problem.

1—The altitude of detonation at which a 10 MT nuclear explosion would cause negligible local fallout is_____ feet (pages 66-67; fig. 2.88).

2.—The initial gamma radiation dose received by personnel in an unshielded position at a distance of 1.5 miles from a 15 MT air burst is approximately _____ roentgens (pages 349-350; figs. 8.35a-8.35b).

Answers on page 24

MANAGEMENT TRAINING

The Management expert, Peter Drucker in "Landmarks of Tomorrow," points out that our most important capital resource is educated people. He says their number, quality, and utilization is the most meaningful index of the wealth-producing capacity of any country. Putting this into 25-cent words, Mark Twain once said: "Soap and education are not as sudden as massacre, but they are more deadly in the long run."

Chairman Roger Jones, of the U. S. Civil Service Commission, recently said: "Federal agencies face the loss of about 8 percent of their career Management people per year in the next five years by retirement alone. This is over twice the acceptable rate in industry. For all agencies, 38 percent of top executives will retire in five years and 66 2/3 percent in ten years." **What does it mean to you and me as Managers?**

To illustrate this tangible need for Management Training, a survey of 429 companies was made by the Alexander Hamilton Institute, and Management Methods Magazine. The survey asked this question: "Looking at your own Management ability, do you feel that you need additional Management Training?" Eighty answered in the affirmative. Of more importance, the same survey asked the subordinates: "In your opinion, does your superior need additional Management Training?" A resounding 94% of the subordinates answered, "Yes."

Another reason we need to emphasize Management Training is pointed up by a statement by Civil Service Commissioner, Chairman Jones. He said: "Supervisor Training loses its full effectiveness when Managers fail to take the medicine they so freely give."

HOW EXECUTIVES CAN UNDO THEIR MISTAKES

It is a grim fact of economic life that decisiveness stands above caution in the order of executive qualifications and the man who makes wrong decisions is often more in demand than the one who makes none. Thus, faced with this dilemma, the ambitious executive has no alternative but to learn to adjust to mistakes and, more important, to undo them whenever possible.

In almost every corporation there exists a hierarchy of errors as well as one of executives and most men in positions of responsibility learn to analyze their mistakes and their possible corrections in terms of this hierarchy, taking into consideration the following factors:

• **The nature of the error:** Just how grave is it? Does it seem worse simply because you never thought yourself capable of making it? Does it affect only yourself, requiring more work or doing the same work over again more carefully? Or does it affect your department and the people working with you? Could your error, if disregarded, take root and grow, endangering or harassing other company operations?

• **Causes of the error:** Do you understand clearly how the mistake was made? Was it due to forgetfulness, lack of foresight or bad judgment? Is it likely to recur? Can you be sure, or take steps to be sure that it won't happen again?

Once you know all the facts about it, it's generally a good idea to admit a mistake . . . .

Admission of an error does not necessarily mean heaping ashes upon one's head however. There are various ways of doing it, and the person who handles this task with intelligence and imagination can frequently transform his error into a constructive force . . . .

The executive confronted by a crisis of his own making should try to think in terms of his boss's reaction. Few, if any, chief executives appreciate or have time to listen to all the details that preceded a mistake or the reasons why it shouldn't have happened. Nor is the boss interested in any subjective description of the anguish his subordinate may have suffered as a result of the error. What he wants to know is simply: "X happened, causing Y and we're doing Z about it" in the most articulate, brief, factual and impersonal manner possible. He will then decide whether the particular solution is right or wrong.

Whatever the mistake is, and whatever the circumstances under which it has been committed, it should always be subjected to the same careful analysis that precedes any decision. All facts about the nature of the mistake and the reasons for its occurring should be gathered and measured against the various solutions and courses of action. The important point is that mistakes should never be ignored nor left there to grow larger. There is always **something** to be done about them.

Excerpted with permission from an article in PRINTER'S INK, 9-11-59.

MEDICAL MEMOS

REGIONAL MEDICAL OFFICE

Fall-Out Filters

What could a person do for protection if this cold war suddenly filled the air with "hot" material? To determine what protection the man on the street could provide for himself in event of radiological or biological attack, a series of tests were performed measuring the respirator protective ability of items of common usage.

Eight household items selected to undergo testing were a man's cotton handkerchief, a woman's cotton handkerchief, cotton dress material, a muslin bed sheet, a man's cotton shirt, a rayon slip, a turkish bath towel and toilet paper. Some of these were tested at different thicknesses and some after saturation with water.

This evaluation program was performed by human subjects who were stationed in an exposure chamber where an aerosol of harmless bacterial spores was introduced at a constant rate to simulate an aerosol of radioactive dust. A mouthpiece was provided as the sampler organ, which, along with the test material, was applied, and later removed, in air locks bordering the test chamber. These anterooms were kept at a greater pressure than the main chamber to prevent escape of the test aerosol.

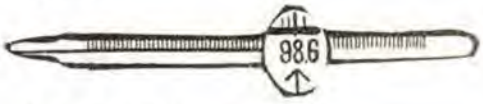
At least 30 different tests, after five minutes of exposure, were made on each item. The number of spores collected on inhalation was counted by standard bacteriological planting procedures. The results showed that the five following items had a filtration efficiency greater than 85 percent: a man's cotton handkerchief of 16 layers 94.2 per cent), 8 layers (88.9 percent) and crumpled (88.1 percent); a bath towel, 2 layers (85.1 percent); and toilet paper, 3 layers (91.4 percent).

Following this screening it was necesary to determine the respiratory resistance of these protective media before their adaptability could be known. Any items with resistance greater than 36mm. of water would be unsuitable except for short duration. The toilet paper was in the same classification due to the damaging effect from mouth moisture.

When the materials were saturated with water and handwrung, their efficacy was decreased, while the respiratory resistance was increased. Hence, wetting the items is impractical and unadvised. By elimination, the man's cotton handkerchief (8 folds) and the bath towel (2 folds) were found to be the best respiratory protection against particulate matter.

If an increased number of people are seen wearing towels about their necks, or holding innumerable handkerchiefs, it could be the pollution and not the pollen that counts.

(Based on a study by H. G. Guyton, H. M. Decker and S. T. Anton, AMA Arch. Indust. Health, 20:91, August, 1959.)

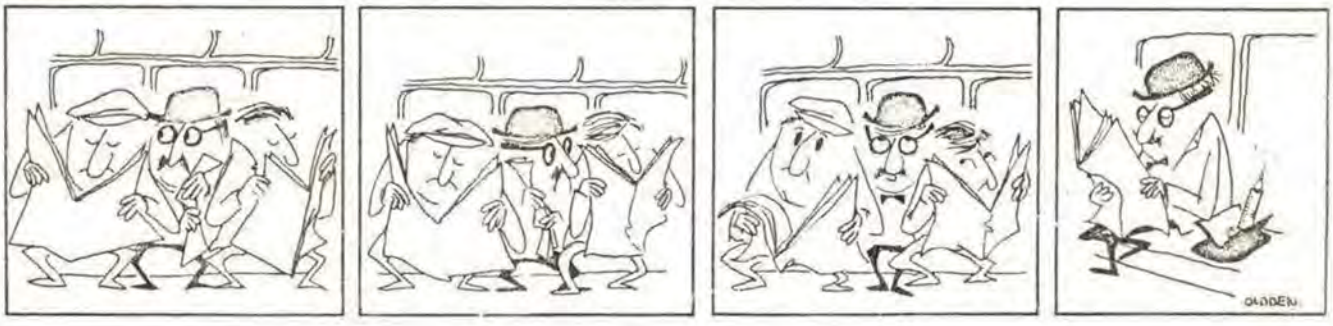


Salk Polio Vaccine

Of the 87 million Americans who have had at least 1 injection of Salk polio vaccine, 68 million have had 3 or more. But the Public Health Service is greatly concerned that 4.5 million children under 5 years of age have not had any inoculations.
How About YOUR Children?

The AMA News gives us **Nothing Serious . . . The ability** to sin differs among people, notes the Chicago Tribune. For instance, a short armed fisherman isn't as big a liar as a long-armed one . . . The mother of a 5 year old boy told a psychiatrist: **"I don't know whether or not he feels insecure, but everybody else in the our neighborhood sure does."**

Clinical Trials



HOW'S YOUR DRIVING PERSONALITY?

A well-adjusted person is more likely to make a good driver because he is inclined to recognize that traffic situations require fair sharing. He acts not only from his own point of view but from that of other drivers.

Getting behind a wheel has some magical way of revealing the type of person each driver is. You can see whether he's inclined to be a bully, thoughtless lawbreaker, self-centered lane stealer, or whether he's reliable, courteous and sportsmanlike.

Since the driver is the cause of more traffic troubles than the car, the road or the weather, driver quality is the critical ingredient in the traffic recipe. No single characteristic stamps the skillful driver - his quality comes from a combination of good physical condition, sound driving knowledge and a sportsmanlike traffic attitude.

What kind of a driver are you? Are you courteous, efficient, dependable - safe?

At-the-wheel, Good Attitudes Mean Happy Motoring!