FAA HORIZONS

OCTOBER 1964

OFFICIAL EMPLOYEE PUBLICATION OF THE FEDERAL AVIATION AGENCY

EDITORIAL:

Who Are the Spokesmen?

"A Federal Aviation Agency spokesman today said . . ."

A pretty impressive opening statement, isn't it? It commands attention, it has the ring of authority and the person reading it has the right to assume that what follows is a reasonable, responsible declaration of fact. This confidence in the printed word is a badge of honor, well-earned by conscientious reporters and publishers.

But are you, as a member of the Federal Aviation Agency, a reliable *spokesman?* Have you ever considered that you yourself are a *spokesman?*

Well you are. You cannot divorce yourself from your affiliation with the FAA—if you are a typical FAAer you are proud of your job, your Agency and the part you play in its efforts to make flying safer and more efficient.

Whatever you say or do, on or off the job, bears the FAA imprint however light it may be. Shop talk of a disparaging nature, critical remarks about co-workers and supervisors, boastful statements—all create a negative impression of our Agency and do nothing to further our mission. All they do is sow the seeds of discontent. Moreover, the bearer unconsciously attributes them to "A Federal Aviation Agency spokesman."

Unlike the military and Government agencies such as the Post Office, we do not wear uniforms and it might be assumed from this that we pass unnoticed in our communities. Nothing could be further from the truth. Make no mistake—we are well known even though we might be the only "Government family" in the neighborhood. What we, as individuals, do is very easily translated into an image of what our Agency is.

Fortunately, and largely through the efforts of each of us, the image is impressive and substantial. It is based on performance that is measurable and visible not only to the growing number of our fellow citizens who regularly use the airways but to the public at large. In spite of more than 50 years of flight, aviation still is not taken for granted—an airplane passing overhead still attracts its share of attention. That airplane, and the people who insure its safe passage from point to point, are part and parcel of the Federal Aviation Agency.

As far as Agencies go we are not the most populous—as of July 31 we numbered 45,200, and in rank we are seventh. Our size is incidental. Our place in the scheme of things is more accurately measured by our production, which has increased in pace with the growth of aviation. Two of our chief functions, air safety and air traffic control, provide a yardstick of our output. In air operations the trend is up—in FY '57 control towers handeled 23.7 million operations, control centers, 8.2 million; in FY '63 traffic increased to 29.2 and 10.2 million, respectively. The estimated rate for FY '64 is 30.9 million operations by control towers and 10.6 million by control centers. The forecast for FY '69 predicts a "handle" of 36.9 and 11.6 million, respectively.

While these figures are climbing steadily the accident rate for United States air carriers has steadily declined. In 1957 there were 113 accidents in which fatalities occurred; in 1963 there were 75; and in 1964 there were 44.

We in the Agency can share in the credit, along with the air carriers and the rest of the aviation community, for reducing the number of accidents. And we can be proud of our ability to adapt to increased air traffic operational loads.

In the above we see tangible proof that we are a first-rate agency staffed by top-quality, dedicated people. Our actions speak louder than words, our example is something that can be viewed, examined, weighed and held up for all to see.

While newspaper stories will continue to start with "A Federal Aviation Agency spokesman today said . . ." the real talking will be done by us, the people who make the FAA tick, and we'll do it by deeds, just as we've done in the past.

FAA HORIZONS

OCTOBER 1964

F E D E R A L A V I A T I O N A G E N C Y

NAJEEB E. HALABY
Administrator

LT. GEN. HAROLD W. GRANT
Deputy Administrator

CHARLES G. WARNICK
Director,
Office of Information Services

MARSHALL C. BENEDICT
Chief,
Employee Information Division

THOMAS J. WHOLEY
Editor

MURRAY NATHANS
Art Director

News and feature stories appearing in FAA HORIZONS which highlight regional personnel or the various aspects of regional activities are prepared by Regional Public Affairs Officers and members of their staff.

FAA HORIZONS, the official employee publication of the Federal Aviation Agency, is published monthly by the Employee Information Division in the Office of Information Services. Articles of general interest pertaining to employees on an Agency-wide basis are welcome. They should be addressed to: Editor, FAA HORIZONS, ID-40, Federal Aviation Agency, Washington, D.C. 20553. Tel. No.: WO 2-5574.

CONTENTS

COVER:
A pilot's eye-view of the newly installed "In Runway Lighting System" at Washington National Airport. Centerline lights, spaced 25 feet apart extend the length of the runway. Touchdown lights, 30 feet left and right of the centerline, stretch for 3,000 feet. The system was developed by Systems Research and Development Service and Airports Service.
FAA photo by Dick Mowrey.

"...AND LOUD SILENCE BEGAN"

Silence was loud in the ears of central Oklahoma residents on July 31 as 26 weeks of eight-times-a-day sonic booms ended. The 1,253d boom was flown in the early afternoon of Thursday, July 30.

Sonic boom studies, designed to help determine the public reaction to supersonic transport jet overpressures, were begun in the Oklahoma City area on a chilly winter morning of Feb. 3, 1964 and ended in a midsummer heat wave.

The study was designed to run through periods of seasonal change both in meteorological conditions and people's living habits.

The booms were generated by Air Force supersonic jets—F-104s, F-101s, F-106s, and B-58 *Hustlers* and ranged from a scheduled one pound boom up to two pounds per square foot of overpressure. The USAF and NASA teamed with FAA in the program.

The sonic boom study was designed to judge the "livability" of SSTs, insofar as public reaction to their man-made thunderclaps is concerned. Some 750,000 people in 30 communities, ranging from rural to high-rise apartments in the metropolitan Oklahoma City area, heard the booms during the 26-week study period.

Preliminary data gathered in the study, presented by Gordon M. Bain, Deputy Administrator for Supersonic Transport Development, included the following:

- As a result of meteorological factors, there was not a uniform distribution of the overpressure pattern. Sometimes the boom overpressures were of greater magnitude 10 miles from the plane's flight track than under the track. Most of the boom levels were recorded at predicted levels, but on some occasions they were increased or diminished.
- During the test period, a total of 12,588 calls or letters were received by a complaint center operated in Oklahoma City. This figure represents approximately two per cent of the population included in the program.
- A total of 2,170 formal damage claims were filed during the 26-week program. Following investigation, 1,732 were denied. Claims totaling $8,608 have been approved for 163 claimants, or an average of $52.81 per claim. A large proportion of these were for cracked plaster or glass.
- No damage from booms was found in 11 test houses instrumented or kept under surveillance in the study.
- Findings in the public reaction and structural data of the Oklahoma City study will be made public following the analysis and evaluation of more than 100,000 statistical recordings.

The regularity of the boom passages, scheduled within seconds of the announced run-time, became an aerial alarm clock for many citizens. They knew that the first boom of the day, at seven o'clock, signaled the time to get up; that the seven-twenty morning boom marked the time to leave the house and head for work in downtown Oklahoma City.

NASA employee is shown in a mobile monitoring unit used on the flight path.

U. S. Air Force F-104 aircraft were responsible for the greater portion of the sonic booms heard over the Oklahoma City area during the six-month FAA/USAF/NASA experiment.

Many people became so accustomed to the accuracy of the booms that they would automatically check their timepieces with the sound of these supersonic flights.

At the conclusion of the study, Administrator Halaby and Gordon Bain addressed a "Headliner" dinner given by the Sigma Delta Chi journalism fraternity and the Oklahoma City Press Club.

Mr. Halaby compared the problems associated with SST development and the sonic boom program to the problems initially faced by other great advances in transportation—stagecoach, steamboat, train, automobile and the first flying machine. In each case, the problems were overcome and the vehicle made its own notable contribution to civilization.

During a question and answer period it was brought out that of all the factors considered in a "boom," such as altitude, speed, weight of the aircraft and weather, altitude has the most influence on the amount of overpressure recorded at ground level. Next, perhaps, was the weight of the

NASA engineer David Hilton (right) and an assistant shown monitoring measuring equipment used to determine the effect of sonic boom overpressure in one of the test houses.

Mrs. Helen G. Waddy points out alleged sonic boom ceiling damage to Administrator Halaby and David J. Perry, Administrative Assistant to Senator "Mike" Monroney of Oklahoma. More than 2,000 claims were filed in the 26-week boom period.

aircraft.' Each factor, however, is important in boom generation.

The seriousness of the program was interrupted occasionally by lighter moments. For example, Mr. Bain related a story of the lady who called regularly and asked to speak to the man running the boom program. When that man got on the phone there would be a period of silence before the lady would shout "BOOM!"—and hang up!

In discussing claims brought as a result of the sonic boom overpressures, Mr. Halaby announced the appointment of three local citizens of Oklahoma City to a committee to help make the claims procedures and standards fair. He emphasized that they were not appointed to judge the claims nor to be an appellant on the claims. Named were attorney, Miss JoAnn McInnis, engineer, Mr. A. Mark Eudaley, and architect, Mr. Dow Gummerson.

After praising the assistance of Governor Henry Bellmon, Mayor George Shirk of Oklahoma City, and Stanley Draper, managing director of the Oklahoma City Chamber of Commerce, Mr. Halaby presented each with a certificate of merit from the Federal Aviation Agency.

Thus ended an important study, an essential element in the nation's supersonic transport development program. ■

Above: Administrator Halaby presented Oklahoma City Mayor George Shirk (right) and other dignitaries with Certificates of Merit for their participation in the sonic boom program. Below: Mr. Halaby was in the spotlight as he addressed a "Headliner" dinner arranged by the Oklahoma City Press Club and Sigma Delta Chi journalism fraternity at the completion of the noise experiment. Booms were flown eight times daily as part of research project on the supersonic transport.

Airport manager and operator Donald W. Brown (left) and principal operations inspector Thomas A. Stagner, Rapid City GADO, look over Brantly B-2B. Right: E. Victor Eldred skids up to the helipad with distributor Don Brown at controls. Lower right: Cowpunchers branded over 500 calves in four hours using modern methods.

PAWLET'S AERIAL COWPUNCHER

Add cowpunching and dogie wrangling to the growing list of chores the versatile helicopter can do.

The staccato *chop-chop-chop* of whirling 'copter blades has joined the clatter of horse's hoofs on E. Victor (Vic) Eldred's vast Pawlet Ranch southeast of Alliance, Neb. He is one of the growing band of ranchers who has taken to the air to do a strictly down-to-earth job—riding the range.

His Brantly B-2 zips along fence lines on inspection trips, whisks supplies from town to various parts of his sprawling domain, rounds up motherless calves, herds cattle and provides transportation for a fast trip into town. Vic's wife, Martha, is checked out in the B-2 and regularly takes her place at the controls.

In a spring-time branding session, Eldred aboard his 'copter, and his ground-bound hands using more traditional methods, rounded up more than 500 calves and had them branded and dehorned in less than four hours. This production line performance was made possible by the use of dual branding tables, electric irons, power dehorning equipment and, of course, the 'copter.

Making sure that everything that goes up comes down safely is the job of Thomas A. Stagner, principal operations inspector of the Rapid City, S. D., General Aviation District Office. He is a former WW II troop carrier pilot who later spent seven years (1951-58) as flying safety supervisor for Anderson Air Activities, operators of the Malden, Mo., contract flying school for the USAF. He left Anderson to join the CAA in 1958 as a general aviation operations inspector in Kansas City.

Besides staying busy giving flight checks to new owner-pilots, Stagner keeps tabs on charter, agricultural and other aviation activities in the area. Vic Eldred, for example, is also owner-operator of a Cessna 180 which he flies from his own 2,900-foot strip and which he keeps stabled with his B-2 'copter.

Helicopter owners in inspector Stagner's area could assemble an impressive 'copter fleet if the notion ever overtook them. Donald W. Brown, fixed base operator at Alliance, trading under the name of Don Air Service, sold 24 'copters in the area since he obtained the distributorship in 1960. Don has a branch at Lodgepole, Neb., and dealers at Gordon and Ogallala, Neb., and at Denver, Colo.

Also operating in the Grand Rapids GADO area is a front running candidate for the non-existent title of "*student* pilot with the most hours." He is a 70-plus-year-old rancher who is perfectly content to go on flying with a student card even though he has logged some 200 hours. As far as he is concerned he doesn't need a private certificate—he says he can check his cattle and wells just as competently with a student ticket.

According to local officials, he got his chance to compare; they outfitted him with a new private pilot license in September.

The helicopter has come a long way from the sketches made by Leonardo da Vinci about 1500 A.D. His ideas were sound but their practical application had to wait. That time is now long past and the helicopter is daily demonstrating that its versatility is limited only by man's imagination. ■

INTERNATIONAL AVIATION IS BIG BUSINESS

"Salaam Aleikum"
"Bon jour"
"Buenos dias"
"Ohayo gozaimasu"

Chances are that a foreign language "good morning" is being said by a member of FAA's Office of International Aviation Affairs somewhere overseas as you read this.

Whether it's surveying for VOR sites in the Syrian desert, installing radar equipment at Rio de Janeiro's Galeao airport, or helping plan an air navigation system for Guatemala, you can be sure that one or more of Ray Maloy's boys are on the job.

Assistant Administrator for International Aviation Affairs Raymond B. Maloy, assisted by his deputy, Robert P. Boyle, is responsible for directing the operations of over 280 employees who compose the three special staffs, two large divisions, and the field complement of IA. These operations have kept pace with the growth of international aviation.

In 1939 there were only a few thousand passengers flying from the United States to Europe. By the end of 1947, this number rose to 152,000 and in 1963 there were over 2½ million people who traveled by air over the North Atlantic alone.

Some 45 years ago the first international air service began between Paris and London when a converted Farman *Goliath* bomber droned off a bumpy field with a load of passengers and started a mammoth chain of events.

Today, a Connecticut chicken hatchery thinks nothing of filling a weekly order from Tokyo for 130,000 baby chicks to be jetted across the Pacific at almost the speed of sound. International civil aviation is, indeed, "big business."

The impetus of commerce and the stimulus of WW II to aviation technology contributed extensively to the progress of the international aviation industry and the United States' role in it. With commercial and political relationships changed greatly by this modern means of transportation, as well as the rising interest in general aviation, the nations of the world had to insure that air operations would be used for the benefit of all people and nations; that it would be developed with safety and economy.

This insurance started in 1944 when representatives from 52 nations met in Chicago to consider how to deal with post-war problems of international civil aviation. It resulted in the establishment of the Convention on International Civil Aviation. An outgrowth of this was the International Civil Aviation Organization (ICAO), which is now a specialized agency of the United Nations.

Charged with the orderly and equitable development of international civil aviation, ICAO has sought to fashion a new world-wide pattern of cooperation in the technical, economic and legal fields of international flying.

On all of these ICAO matters, FAA's Office of International Aviation Affairs not only coordinates the Agency positions but also provides the Secretariat of the Interagency Group on International Aviation (IGIA), which is headed by W. C. Hanneman. This group also recommends the overall United States position for all aviation activities in ICAO to the Department of State.

In the field of international aviation, certain developments can become involved in ticklish political or national security implications. To provide advice on such matters, IA has a Field Service Staff, headed by Howard W. Helfert.

In an effort to strengthen the means for developing international aviation policy and programs, the Interagency Committee on International Aviation Policy (ICIAP), under State Department chairmanship, was established. FAA Administrator N. E. Halaby is vice chairman of ICIAP and has used this coordinating mechanism in connection with many types of non-technical international problems. Assisting the Administrator in ICIAP is Edmund V. Shores who heads up the International Organizations Division.

Another responsibility of the FAA and IA is to provide the principal technical aviation support of the State Department's Agency for International Development (AID). For over a quarter of a century, the FAA and its predecessor, the Civil Aeronautics Administration, have been developing and promoting international civil aviation. From the beginning, emphasis was placed on the export of United States methods and materials. This was done by placing American experts as residents overseas, by providing advisory services, installing facilities and engineering airports, and by training foreign nationals both in the United States and abroad.

At the end of Fiscal Year 1964, FAA's overseas technical assistance units included 22 single-country Civil Aviation Assistance Groups (CAAGs) or offices, a Panama-based Regional Aviation Assistance Group (RAAG) serving all of

Clockwise from top left: Former students of CAAG/FAA technicians in Afghanistan keep fleet aircraft in top mechanical condition. Paul G. Taylor, chief, CAAG for Iran, and Thorlief Ellison, FAA civil engineer (right), check soil composition at proposed VOR site near Darband, Iran. Alto Hailu Gabre-Mariam, chief radio engineer, Civil Air Administration, Ethopia, checks the antenna loading coil at Massio's non-directional beacon. Electronics instructor and student at the Kabul CAAG, Afghanistan,

Stanley Sacks, FAA's Air Traffic Service, and Wing Commander Udom Thanokulabutra, RTAF, observe operations in the Bangkok Control Tower, Thailand.

Above: Enrique Morchio, Directorate of Aeronautics, Santiago, Chili, and Jack Farrance, FAA electronics technician, check operations of a recorder panel. Below: Raymond B. Maloy, IA-1 (right) and Robert P. Boyle, IA-2, discuss operations of the Office of International Aviation Affairs.

Latin America, and a multi-country group (ROCAP) in Guatemala serving Central America.

When you talk of technical assistance, you're entering Bob Green's domain. If it's managing aviation assistance to foreign governments, conducting a special foreign survey, procuring aviation materials, or running the Agency's foreign visitor and foreign trainee program, you can be sure that the Technical Assistance Division has a hand in the action. The Division, among several dozen other activities, selects, trains and supervises FAAers who serve overseas in the foreign assistance program. Authorized overseas staffing currently averages 128 positions.

To illustrate technical assistance in action, consider a recent request from the Government of Thailand for a study of aviation facilities in the Bangkok area.

A five-man airport survey team under the direction of Garrison Costar, a civil engineer from IA, was sent to Thailand to look over the situation and to come up with the right answers.

Survey Team in Bangkok

The group took to Bangkok over 100 years of combined aviation experience in the persons of Walter Barbo, engineer and airport planner, Airports Service; Daniel Scanlon, construction engineer, Bureau of National Capital Airports; Stan Sacks, air traffic control specialist, Air Traffic Service; and Frank McDermott, transportation economist from CAB's Bureau of International Affairs.

The survey included traffic forecasts, airport capacity studies and a report of where improvements were needed in various aviation services.

Results of the team's findings are currently being evaluated in Washington headquarters. When completed, the whole package will be returned for presentation to the Thai Government.

Under the separate sponsorship of AID or the Departments of State and Defense, ICAO, or directly by other governments, FAA trains an average of 100 or more foreign nationals in the United States at any one time. Trainee arrivals during last fiscal year numbered 274. Of these, 42 were from Latin America, 108 from the European-African area and 124 from Asia.

Naturally, FAA's flying safety role extends into the international picture. Regional safety inspectors of the Agency, based both in the United States and overseas, are responsible for making sure that United States air carriers comply with United States flight standards and safety regulations, as well as foreign air traffic rules and procedures. To help these regions in this task, IA provides policy guidance through designated International Aviation Affairs officers assigned by each region.

On a global basis, communication centers have been reorganized for improved reception and transmission; airports have been improved and lighted, approach and landing procedures have been prepared and pilots and air traffic controllers trained to apply them; national civil aviation administrations have been reorganized with a resulting improvement in efficiency; governments have been helped in the preparation of their laws, regulations and civil aviation development plans; and a variety of other safety measures have been introduced. Personnel have been trained to do a variety of functions and plans for further civil aviation development are in the mill.

Yes, international civil aviation is big business, and FAA's Office of International Aviation Affairs is one of its biggest assets. ■

Changing of the Guard
At the Aeronautical Center. . .

LANE *for* BAYNE

Lewis N. Bayne: "People are the most important ingredient in any job."

Mention a 237-acre "spread" in the land-conscious West and the polite assumption is you are talking about a kitchen garden—but mention FAA's Aeronautical Center at Oklahoma City which, coincidentally, encompasses 237 acres and you have an immensely respectful audience.

Commanding equal respect is the Aero Center's manager for the past four years, silver thatched intense Lewis N. Bayne who retired Sept. 1. Bayne, who sprinkles his conversation with aphorisms—some salty, but all to the point, believes a manager manages best when he circulates through the areas where the work is being done.

For a man trained in the exacting rules of accountancy (he earned his Bachelor of Commercial Science at Benjamin Franklin University, Washington, D. C. in 1933) he has little patience with the tight little, right little, way of doing things by the numbers. "Forms and reports have their uses, of course, but nothing beats talking to the men doing the work," he says, punctuating his earnest delivery with short, sharp jabs of his pencil.

Regardless of his personal feelings, the Manager of the Aeronautical Center can never evade or ignore the flood of forms and reports that control the operation and provide him with the big picture. Bayne is the first to admit it. At his finger tips, in the massive mahogany desk that dominated his spacious office on the third floor of the Headquarters building, he maintained an encyclopedia collection of facts, figures, charts and graphs that summarized in succinct detail what the Center is, was, and the direction it is headed.

When Bayne, who is 57 and as slim and tough as a six-foot section of a telephone pole, succeeded the Center's first Manager, Fred Lanter, in Oct. 1960, the value of the installation was approximately $19,365,000. It is now $32,-117,000; the latest major addition being the $3.5 million airman and aircraft records building. Lew Bayne was the chief guardian and director of this expansion.

The forms and reports are there too, to keep track of the 4,416 Center employees, the largest concentration of FAA workers, anywhere, who bring an annual $32 million payroll into the Oklahoma City area. The forms determine the size of the budget and how it will be spent—the Center's 1964 budget is $77.8 million, biggest ever.

This is the management job that Bayne passed on to W. Lloyd Lane before he closed out his 34-year-long career with the Federal Government, 24 of which were spent in the FAA and its predecessor, the Civil Aeronautics Administration.

Lane comes to the job after serving a year-and-a-half as Deputy Director of Flight Standards Service. He joined the CAA in 1947 as a Deputy Regional Attorney in Kansas City, Mo., and became Regional Counsel in 1953, a position he held until he transferred to Washington in 1962.

The Manager's job at the Aeronautical Center is a difficult one to define. As Bayne sees it, it is a combination of the roles of Regional Director, Service Director, and Executive Officer—each function is unique but all must be blended in just the right proportions to result in effective management. Lew Bayne mastered the knack, and for good measure added large doses of effective public relations which redounded to the Agency's credit and profit.

"This aviation thing is amazing—no, I don't just mean the technical side, that's remarkable, of course. What I mean are the people. Here we have a group of men and women who have taken an avocation and turned it into a vocation," Bayne said, leaning back in his heavy leather chair, his glasses dangling from his hand.

"We've got lots of them here—old-time pilots, ham operators, mechanics—almost all of them self-taught. And with this beginning they set out to fashion an entirely new dimension in transportation and recreation."

Lew Bayne is pretty remarkable himself, a fact not lost on the city fathers of Oklahoma City. Learning of his approaching retirement they offered him the job of manager of the Oklahoma City's Urban Action Foundation, a civic organization whose chief aim is the revitalization of the downtown section.

Foundation president Dean A. McGee, in announcing Bayne's acceptance said, "We've been hunting for a manager since we organized (Oct., 1962) but never quite found the man until now."

Bayne likes the challenge offered by the new job. "When I was offered an opportunity to stay in Oklahoma City, I grabbed it," he told Urban Action members.

Lew Bayne married Jennie A. Denison of Clinton, Md. in 1933, the year he graduated from college. He himself is that rarity among Federal employees—a native Washingtonian. A son, James, is a Naval Academy graduate and a Navy pilot, and a daughter, Suzanne, is married and living in Oklahoma City.

In his new job Lew Bayne intends to stick to his philosophy which is based on the proposition: "Treat people like people—don't always be out 'goat hunting.'" ■

Problem + Ingenuity x Hard Work = Solution

PROJECT DOORKNOB

Quick-freezing venemous tropical reptiles is not the sort of thing Carl D. Millet, Southern Region electronic maintenance technician, goes around doing for kicks—but that is what he had to do this summer while working on "Project Doorknob" in Panama.

Carl encountered a *fer-de-lance*—deadly cousin of the rattlesnake—while prowling around the tight confines of the equipment room in the long-range radar unit 50 feet above Semaphore Hill, Canal Zone. Man and serpent locked eyes. Millet, unarmed, groped cautiously in the gloom for a weapon. Still rigidly facing the snake his hand closed around a small carbon dioxide fire extinguisher. In a lightning fast move, Carl discharged the frigid gas, stunning and half-freezing the snake long enough for him to kill it.

Carl Millet was one of a hand picked crew of Southern Region systems maintenance, air traffic and installations technicians mobilized under the direction of Wilborn B. (Bill) Rucker, SO Installation and Materiel Division Chief. Their job was to carry out a multi-million dollar joint FAA-Department of Defense modernization program of the Agency's air navigation system in Panama. Nicknamed "Project Doorknob," the basic part of the program is now completed. The finishing touches will be applied before this year's end.

Project Doorknob was set in motion by the signing of a memorandum of agreement in July 1963 following recommendations made by an on-the-site study group headed by USAF Lieut. Col. Vincent L. Constantino, IM-135, Washington-based Project Manager. Working hand-in-glove with him was Lieut. Col. Charles H. Metzger, USAF, who represented the Department of Defense. The collaboration was fruitful. Among other things, it produced agreement to transfer a considerable amount of Air Force radar and air navigation equipment to the FAA at no cost.

Once the plans were laid, orders went out to Arvin O. Basnight's Southern Region to carry them out. On Jan. 4, 1964 construction started in the steaming jungle heat where temperatures hovered at 110 degrees in the daytime; inside radomes, 120 degrees was not uncommon. Production schedules were met on time and in some cases exceeded.

As the heat-wilted pages came off the calendar, construction progressed: A long-range radar bloomed atop Semaphore Hill in the Zone, an airport surveillance radar took root on Perico Island, a Doppler VORTAC and high-powered homing facility decorated Taboga Island, and a VORTAC and high-powered homing facility appeared on France Field in the Canal Zone.

While all this was going on, Cecil Marks, resident electronic engineer in charge of long-range radar installation, was learning about snakes too. His heavy boots came within inches of disturbing the response of a *bushmaster*, a reptile notorious for instant, fatal repose to threat. Nothing happened. And nothing happened later when Marks unknowingly strode through a nest of two-foot-long baby boa constrictors. The mother, probably a typical 15-footer, fortunately was absent.

In the early stages, Project Doorknob got an assist from a source that had been slumbering unnoticed for almost 20 years in the thick jungle on Semaphore Hill. In clearing the overgrowth, a telephone terminal box was discovered. Research of old drawings revealed it to be part of a WW II anti-aircraft artillery communications net. Quick to take advantage of unexpected riches, the technicians put the line back into operation, hooked on their phones and another shortcut was achieved.

For another time-saver, the engineers took to the air in a helicopter to waft a 750-pound antenna 1,000 feet in the air and across the 150-foot radius spiderweb-like Doppler antenna surrounding the base of the TACAN on Taboga Island.

So it went—problem, solution; problem, solution—in the steaming, raucous Panama jungle until the task was done.

Because of its importance, "Doorknob" commanded top-level attention. General Andrew P. O'Meara, Commander-in-Chief of the United States Southern Command and responsible for the defense of the Panama Canal Zone, took great personal interest in the modernization program. It is another weapon in his arensal and enables him to carry out his mission with even greater efficiency.

Administrator Halaby, Deputy Administrator Lieut. Gen. Harold W. Grant and Southern Region Director Arvin O. Basnight visited the Zone to inspect the work in progress. With the modernized facilities the Agency's Southern Region will be able to provide even better air traffic service to military and civil aviation.

Project Doorknob opened the door to a corridor linking the Americas. In its own way it parallels the Panama Canal, another all-American venture that linked two great oceans and opened up another world. On Aug. 15, 1914 the first ship transited the Canal—50 years and five days later the Doppler VORTAC and high-powered homing facility on Taboga Island were in commission, missing by five days the completion date established by the engineers who were unaware of the significance of August 15. ■

Above: This contemporary new Air Route Traffic Control Center and International Flight Service Station in the Canal Zone is the focal point of "Project Doorknob." Below: Carl D. Millet came face-to-face with violent death 50 feet above ground in this radar tower when he was suddenly confronted by one of Panama's deadly snakes.

Above: Deputy Administrator Lieut. Gen. Harold W. Grant (left) and SO Director Arvin O. Basnight give airport surveillance radar the once-over. Below: An Inca artifact commands the attention of Administrator Halaby while on "Doorknob" visit. With him are, from left, James L. Dalton, Clifford P. Rosacrans and John Cofer.

Above: Inspector Don Schminkey checks build-up of a JT-4 engine during overhaul. Left: Braniff Captain Robert Rogis completes a proficiency check given by operations inspector Ralph Noltemeier, ACDO-32, Dallas. Right: electronics inspector M. Larry Bottie, right, discusses inspection with Edward Gerdner, TTA.

Safety Is FAA Product

A six per cent rise in commercial air travel in 1963 reflects the growing reliance of the American public on air transportation. Total number of passengers carried that year topped 63,000,000. When passengers purchased their tickets, they expressed confidence in the airlines and the flight crew.

Most of them knew in a general way that the Government was in the picture too, and this may have bolstered their confidence. It is possible that many of them knew that the Federal Aviation Agency represented the Government in this instance, but except for a tiny minority it is practically certain that they were totally unaware of the role of the air carrier inspector. Yet the relationship between the two, inspector and passenger, is very close and important.

Air carrier inspectors are the FAA's airline specialists. Their one concern is the safety regulations and they concentrate on three areas of airline activity—operations, maintenance and electronics.

Operations inspectors are transport pilots and flight engineers. One of their major duties is examining and certificating pilots, engineers, dispatchers and navigators.

Another is training. Operations inspectors review and approve air carrier flight and ground training programs. They sit in classrooms observing instructors and teaching methods, and they monitor refresher training.

Operations inspectors observe a certain percentage of the flight checks given by the air carriers. Periodically they conduct the "en route" check which is, in essence, an overall evaluation of a scheduled passenger flight. On this one the inspector sits in the cockpit to mark the crew's proficiency in flying the aircraft.

The qualified mechanic is as important to the well being of an aircraft as the qualified pilot. This is the province of the maintenance inspectors who are in the master category and certificate the Air-Frame and Power Plant (A&P) mechanics who keep the aircraft in top condition.

Airplanes are constantly being inspected—before and after every flight, and progressively as flying hours pile up on them. This goes for engines, too. At stated intervals both are taken apart, overhauled and put back together as good as new.

Maintenance inspectors have surveillance over all these practices, over the quality of materials used and the work performed in the shops. They review and approve maintenance programs and the company manuals that go with every airplane.

Electronics inspectors are engineers, concerned with the airborne communications and navigation equipment; the radio and the innumerable flight instruments and devices such as compasses, weather radar, distance measuring equipment, transponders, radio altimeters, automatic pilots, engine analyzers, and flight recorders to name a few. They, too, check performance and spend a great deal of time in the shops where instruments are being repaired, calibrated or overhauled.

A record is kept on everything that goes into an airplane, including the men who operate it. Any inspector can tell by looking at the log how many hours a pilot has flown or a cylinder has run, how long since a tail or body section was replaced, the last time new tires were put on the landing gear, or a radio tube was changed. ■

NAFEC'S SIMULATOR PILOTS

"Washington Center . . American jet four-twenty leaving eight at one three."

"Honolulu Approach Control this is Northwest fourteen, over."

"Midway Tower . . United five-sixteen outer marker inbound."

Pilot communications like these handled daily are the lifeblood of air traffic control.

In the Air Traffic Control Simulation Laboratories at the Agency's National Aviation Facilities Experimental Center (NAFEC) in Atlantic City, N. J., the same dialogue goes on. But the big difference is that the "pilots" are all captive in one building, none of them are really airborne and about 70 per cent of them are women.

These are NAFEC's simulator pilots.

Since the early 1950s, dynamic simulation techniques and equipment have provided air traffic control specialists with improved means of studying current air traffic control problems and the feasibility of futuristic systems before they are fully developed.

Studies have been made to improve air route structures and procedures, determine the effects of new airports and evaluate new concepts and equipment.

Beyond actual testing, simulation projects involve the study of flow characteristics and system capacity, coordination and simplification, the design and development of control displays, computers and communications. Each is essential to the modernization program conducted by the Systems Research and Development Service.

In most ATC simulation projects at the Center, the only way a controller may realize that he is not controlling traffic at his home station is that most of the reports and requests reaching his headset are soprano rather than baritone.

Each aircraft in the traffic sample under study is represented by a device known as a target generator. Each generator can duplicate the performance characteristics of any aircraft, including a supersonic transport. As the simulator pilot maneuvers the generator display, in accordance with the prescribed flight plan and control instructions, the target produced is shown as if the traffic sample were under actual radar surveillance.

With 108 of these generators, each capable of representing two or three flights per test run, the system can study any terminal control area in the world.

Though none of the simulator operators are rated pilots, their knowledge of flight operations is exceptional. Daniel G. Vilt, their educator and operations director, says, "Many of them would make excellent pilots. With their knowledge of navigation, communications and procedures, all they're lacking is the necessary stick time and a feel for the air."

Vilt, an air traffic control specialist and former Air Force pilot with over 6,000 hours flying time, is proud that two of his female operators are now training for their private pilot rating.

Simulator pilot training is short but it is extensive. It takes from four to six weeks of classroom instruction, followed by a variable period of on-the-job training. About five per cent of the trainees wash out.

In the early stages, students study the fundamentals: instruments and radio navigation aids; instrument flight maneuvers and approaches; and ATC procedures, including radio techniques; terminology and definitions; contact procedures and position reporting; the phonetic alphabet; ATC speedwriting and air traffic clearances.

Training at the controls continues as project requirements change. Also, the "pilots" are thoroughly briefed before each new project begins and given an instruction sheet explaining the purpose of the simulation.

Simulator pilots provide controllers with a unique traffic environment. One-a-week traffic situations can be duplicated three or four times a day. Airplanes can be "frozen" on the spot while controllers confer to resolve problems being encountered. A controller who gives a flight an undesirable altitude is later informed of the fact by a computer. Any aircraft can be radar beacon equipped with the turn of a switch.

Soon the system will feature alphanumeric license tags as proposed for the National Airspace System (NAS). And where else can you find pilots already following experimental supersonic transport procedures?

Simulation has become a tremendous research and development tool in the continuing study of air traffic. NAFEC's simulator pilots perform vital functions in the process and, just like their airborne counterparts, they too have their moments.

During a terminal study of the Washington, D. C. area not long ago, a simulator pilot was approaching Washington National Airport in a turboprop *Viscount*. Upon receiving instructions to enter a holding pattern at the Brook Intersection, her response was loud and clear: "Washington Approach Control . . . I'll have you know that this is the sixth time I've had to hold at Brook this week!" ■

Betty Ann Doerr logs her flight as Leslie P. Wallace, supervisor, watches.

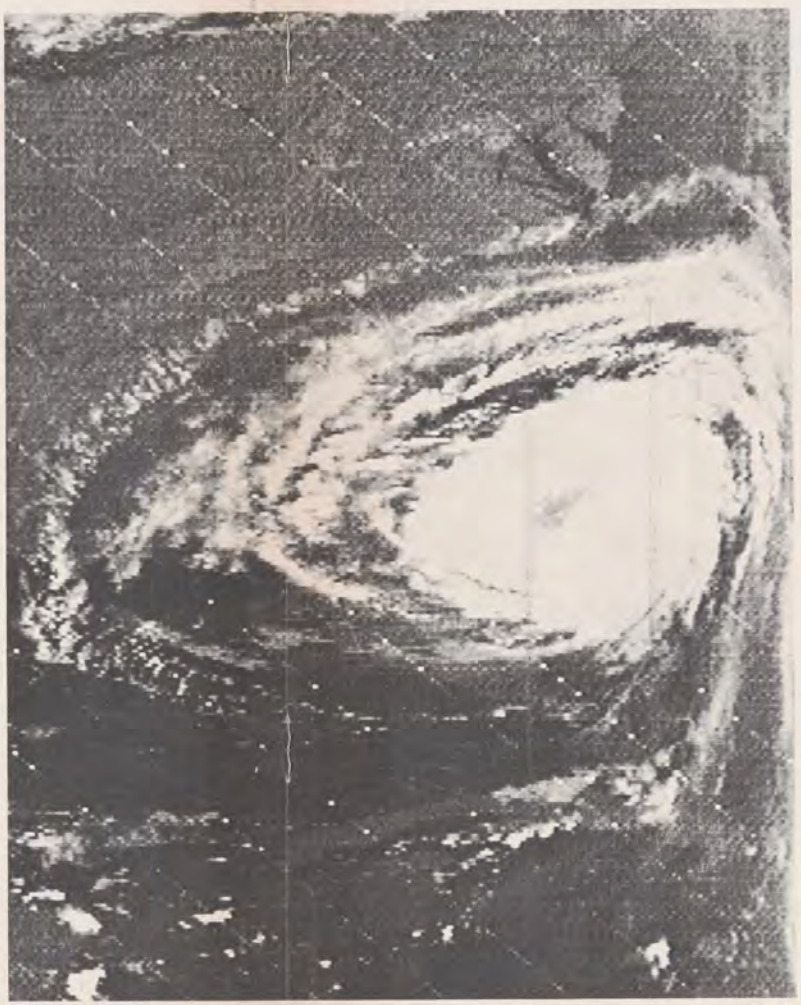
These 60 generators comprise the aircraft input of NAFEC's large ATC simulation system.

THOSE WINDY, WICKED WOMEN – *Cleo, Dora and Ethel*

Courtesy Miami Herald

From top left, reading clockwise: Frank Landry of Opa Locka may be interested in a current FAA study on the adequacy of tie-downs. Evacuated aircraft fared better. Above, from left, Joseph C. Cordell, Carlton H. Melvin, William A. Corley and Roderick K. Crane of the SMDO-3 (Jacksonville) Field Maintenance party just prior to installing a new reflector. Right: NASA's Nimbus I caught this view of Hurricane Dora from 245 miles up showing storm clouds covering the coasts of Florida, Georgia, and North and South Carolina. The eye is the dark circle in the center of the white cloud mass. Below: Damaged trailer park in Hollywood, Fla. Left, Damage from Cleo's and Dora's high winds was heaviest on antenna towers. FAA personnel made emergency repairs, like this SMDO-2 party (Miami), but more extensive work required contractors. All of Dora's damage, except flight checks was cleaned up in five days.

Courtesy Miami Herald



Winds and tides which wrought millions of dollars in damage over a four state area during August and September showed no mercy to facilities of FAA's Southern Region. Regional Director Arvin O. Basnight reported that three hurricanes rampaged through the region in scarcely more than two weeks.

The triple onslaught found systems maintenance personnel standing hurricane watch with Dora, checking repairs from Cleo and keeping a weather eye on the track of Ethel. Down time and unscheduled outages from all three, however, were less than some caused by single less violent storms of the past.

This was due in part to the "dry" nature of hard hitting Cora, but mainly to long experience in dealing with Nature's excesses in the Southern Region. Good preparation and a liberal amount of work, and even heroics on the part of FAA personnel, kept outages to a minimum.

Typical cases were the repair of the Biscayne Bay Omni and a 250-foot tower at Seals, Ga.

The quick return of the Cora-damaged Biscayne Omni, located on pilings out in Biscayne Bay, to operational status can be credited to the seamanship of Jule D. McDowell, Chief, Evaluation Section, Systems Maintenance District Office #2. As soon as a police helicopter reported that the tower had not blown down, McDowell and Orlando Gonzales, EMT, SM sector 222, volunteered to use McDowell's private boat to go out and repair the damage. In deference to McDowell's boating experience, Gus T. Atkins, Chief, SMDO 2, authorized the trip even though the bay waters were still churning under winds of gale force. Their feat was equalled in Dora's wake when George Ross climbed a 250-foot microwave tower during a 45-knot wind to repair damage to a structural member.

Quick response to emergencies such as these were common because SMS personnel were stationed close to the facilities for which they were responsible as part of a normal hurricane watch. This procedure made it possible to remove or secure equipment which was vulnerable to wind damage and to repair structural damage quickly.

Tower and center personnel caught their share of the work-load too. More than 400 civil and military aircraft were evacuated, most under IFR conditions, in the hours preceding Cleo's 1:00 A.M. onslaught. Even though traffic ceased, many tower crews stayed on duty to protect equipment. Antennas were removed, glass was taped or boarded, and mops and buckets were kept handy to fight the water which literally came through the walls under the force of the wind.

Cleo's damage was confined mostly to the Miami area while Dora's stretched from Jacksonville across the State of Florida and up through Georgia and the Carolinas. Some antenna towers were blown down and microwave dishes were blown askew, but most of the long list of short lived unscheduled outages resulted from loss of power and telephone lines.

When Miami traffic resumed only a few hours after Cora passed on, adequate traffic control facilities were available to receive it. ■

FAA ADOPTS NEW RADAR SAFEGUARD PROCEDURES

FAA took prompt steps this summer to provide significant additional safeguards against any possible misidentification of aircraft by radar. The action followed a fatal accident involving a plane in contact with an air traffic controller stationed at March Field, Calif.

National procedures now provide that "before an aircraft can be radar identified by the use of turns, a controller must first obtain a position report from the pilot stating that he is within the area of radar coverage."

The Western Region ordered immediate local changes in the air traffic control procedures used at March Field to prevent another such tragedy.

An extremely rare combination of circumstances resulted in radar misidentification of an aircraft that crashed into cloud-obscured California mountains last June. Pilot-owner Rex C. Corder and two passengers, all of California, were killed.

FAA said in its report, "Even though . . . radar identification procedures have been successfully used for a number of years, and it is highly unlikely that a similar set of circumstances would again occur, the FAA took immediate action to provide additional safeguards."

The Agency's frank report of the tragedy elicited commendation from the aviation community.

J. Grady Parrott, president of the Missionary Aviation Fellowship, Fullerton, Calif., said, "I would like to express our hearty commendation for the complete candor" of the FAA report.

The FAA controller at March Field first became involved when a target appeared on his radar scope about six miles north of Lake Arrowhead. He had been advised by the Los Angeles Air Route Traffic Control Center that Corder, flying a light, twin-engine airplane, was in that vicinity. The controller established radio contact with Corder who advised he was "approaching Arrowhead intersection." Three times the controller instructed Corder to make certain turns, including a descent to 7,200 feet. Corder acknowledged all instructions and the target on the scope executed the maneuvers.

However, the target did not respond to a fourth instruction, and Corder did not reply. At 2:51 p.m. Corder had reported he was holding level at 7,200 feet. Later, the wreckage was found at that altitude on the side of the 11,500-foot mountain with the instrument panel clock stopped at 2:54 p.m.

FAA determined after exhaustive analysis that Corder's plane was not visible on the scope and the target the controller did see has never been identified. The mystery aircraft faded off the radar screen near the outer marker of the Ontario, Calif., airport and the Ontario tower later reported that an unidentified light plan was observed east of the airport about that time. But attempts to trace the plane proved futile.

The FAA Administrator recommended that an "equitable settlement be made as soon as possible of any claims against the Government arising from the accident. This action was taken to aid the survivors in avoiding expenses and delays which often accompany litigation."

The change in procedure requiring a controller to first obtain a position report from the pilot assuring that he is within the area of radar coverage before making a radar-identification by the use of turns, does not affect radar beacon identification procedures which make misidentification nearly impossible. However, while the vast majority of airline and military aircraft are beacon equipped, the vast majority of privately-owned aircraft are not.

The FAA Administrator's recommendations were submitted to the Civil Aeronautics Board as "the proper conclusions to be drawn from the evidence revealed.

"Further, these recommendations relate to the facts, conditions, and circumstances of this accident and are not intended by the (FAA) Administrator to be a determination of probable cause."

Emergency Role of Private Plane Described In FAA Publication

Deputy Administrator Lieut. Gen. Harold W. Grant, USAF (left), presents FAA's new defense airlift guide to Edward A. McDermott, Director, Office of Emergency Planning, White House, in a special ceremony held recently at the Agency's headquarters in Washington.

The guide outlines the use of privately owned aircraft during a national emergency. The 150-page publication, *State and Regional Defense Airlift (SARDA) Planning*, was prepared in cooperation with McDermott's office, the Office of Civil Defense, Office of Emergency Transportation and others involved in civil defense and recovery operations.

YOUNGSTERS SAY "THANK YOU"

Recently, Orray W. Blanton, FSS Chief at Bellingham, Wash., invited students in the local schools to visit the FAA facility. More than 290 accepted. Later, many letters of thanks were received, and here are two:

"Dear Mr. Blanton:

"Thank you for letting us go into the building. And I like the balloon. And I like you very much. And I saw a black balloon. I like that other man too. Your friend, Terry Harriman."

"Dear Mr. Blanton and Mr. Allen:

"Thank you for inviting us to the Flight Service Station. Thank you for taking the time to show us the various instruments. We enjoyed seeing the actual instruments.

"We appreciated your explaining of the tele-type, and we enjoyed seeing our class name go through the machine. We liked having the tele-type paper.

"We liked watching the balloon go out of sight. We hope someone finds our note and sends it to us.

"In closing, we would like to thank you for your autograph. We enjoyed ourselves very much. Thank you sincerely, 4th and 5th Grade."

It's A Small World — SM Men Meet After 35 Years

Roy Nielson, EMT/Relief, was on duty in the Reno, Nev., systems maintenance sector office. Another relief man, Walter Lottridge, headquartered in Boise, entered. Walt recognized Roy and they began wondering where and when they had met.

It turned out that both had been in the same Navy radio operators school in San Diego in 1929. After graduating, each had gone to sea. Roy served 12 years in the Navy, Walt about 10, prior to joining the old CAA. This was their first meeting since 1929.

A COLD, DRIZZLY DAY, FALLEN FLAGS SET OFF CHAIN OF "HAPPY EVENTS"

Vincent Baron, right, and Freedom Foundation's Hagarty

Tuesday, April 30, 1963, was a drizzly, windy day in Washington, D. C.

The Duchess of Luxembourg was visiting the city, and on Memorial Bridge United States and Luxembourg flags were flying.

Vincent Baron, a Navy Department employee (he joined FAA a year later), was driving across the bridge on his way home.

Suddenly, the wind tore one of the American flags on the bridge from its mounting. The flag blew across the windshield of a car in front of Baron's.

Baron stopped in the belief that the other driver would stop to pick up the flag—but the driver continued and the flag blew onto the muddy roadway.

Baron left his car, picked up Old Glory and placed it in his car. Meanwhile, other U. S. flags were being whipped onto the road by the wind. Motorists were ignoring and actually driving over them.

While a waiting line of irate drivers honked and jeered at him, Baron halted traffic with his car and picked some 30 flags from the dirt, getting soaked to the skin in the process.

A reporter from the Washington *Daily News* happened by and suggested to Baron he write a letter to the editor of the *News* explaining the situation.

Baron took all the flags to the office of the editor, along with the suggested letter.

The paper next day carried a story on the incident, along with photos of the flags and Baron.

Then a series of "good things" began to happen to Baron.

- He was called by his Congressman, Rep. Charlie S. Joelson of New Jersey, for a conference and commendations.
- He was honored by having an account of his deed read before a session of Congress.
- His letter concerning the incident was read into the *Congressional Record*.
- The Fairfax, Va., American Legion Post presented him with their Americanism Award and medal.
- The Anthony Wayne Post of the American Legion in Virginia presented him with their Americanism Award and medal.
- The Betsy Ross Award Committee picked him as the recipient of its national Betsy Ross Award for distinguished service to our country's flag and its traditions.

Shortly after joining the FAA as chief of the Industrial Engineering and Safety Staff, Systems Maintenance, Western Region, Baron received still another award. The Freedom Foundation at Valley Forge, Pa., announced that Baron had been selected to receive that organization's George Washington Honor Medal.

At a ceremony attended by Regional Director Joseph H. Tippets and his division chiefs, Baron was handed the coveted medal and a $100 check by W. Jerome Hagarty, vice president of the Freedom Foundation.

"I didn't do anything unusual," Baron commented. "When I was a child I was taught that the American flag should never be allowed to touch the dirt—and I never forgot it."

And in his commendatory speech, Tippets told Baron, "The people in this room, the FAA, and the American people have reason to be proud of you. Your action reflects the respect we should all pay to our flag."

NAFEC Manager Harrison Receives Second Award

William F. Harrison, Manager of the National Aviation Facilities Experimental Center, recently was presented with a Special Service Award by the First Civil Service Region, making the second award which he has received in the past two months.

Harrison was cited for outstanding support of the Federal merit system, as evidenced by the success of the conference of the Federal Personnel Association of New York and New Jersey held this summer in Atlantic City. The meeting was chaired by William F. Patterson, personnel and training chief of NAFEC. Several other members of Harrison's staff also participated.

A month earlier, Harrison had been cited by a group of unions for the outstanding labor relations program which he has developed at the Center since becoming manager in 1962.

Plastic Bubble Provides Radar Snow Protection

A huge plastic bubble, similar to the type utilized at mountaintop radar sites, is being used by the FAA for the first time in the Western Region to protect air navigation facilities from heavy snows.

The big dome, 55 feet in diameter, will be installed near Mullan Pass, Idaho, to protect the very high frequency omnidirectional radio range and tactical air navigation (VORTAC) facilities. The VORTAC installation is located at the 6,000-foot level of mountainous terrain near the Idaho-Washington border.

Mullan Pass frequently has snow 12 feet or more in depth and these have sometimes put the VORTAC "off the air." It was felt that the plastic bubble would give better protection to the equipment than a frame structure.

HOME AGAIN

Bringing order from chaos is the job facing secretary Colleen A. Ryan, I&M Division, Alaskan Region, as she contemplates the move of Regional Headquarters from its post-earthquake home on Elmendorf AFB to the Hill Building. The move of all Regional offices from throughout Anchorage was finished in less than 18 hours.

FLIER MEETS FAA ACADEMY GRADUATE IN PANAMA

Tribute was paid to the Federal Aviation Agency's international training program recently by Mrs. L. D. Hallman, Oklahoma City housewife and aviatrix, upon her return from an extensive flight through Central America.

Flying with her children in her own small single-engine aircraft, Mrs. Hallman related in a letter to the FAA's international office how she encountered heavy tropical rains approaching the town of David, Panama. Abandoning her direct course to avoid the storm, she flew along the coastline to a point where she could receive instructions in English from the control tower at David.

The tower operator was Luis Pastor, a native of Panama who had received training at the FAA Academy in Oklahoma City as a member of the international class held December 1963 through March 1964. He was then given on-the-job training at the Imeson Airport Tower, Jacksonville, Fla., before returning to his native Panama.

Mrs. Hallman described the courtesy extended her by Pastor, who took the time to meet her aircraft and personally welcome her family and assist them through customs and immigration, acting as interpreter. Because weather forced the family to remain in the area for some time, he arranged transportation for them to the best hotel.

Later, as conditions improved, Pastor notified Mrs. Hallman, helped her file her flight plan and maintained radio contact until she could communicate with the Panama Control Center and effect a landing. Passing through David on the return flight, she found Pastor busy conducting a search and rescue operation for two persons downed eight miles off the coast.

Concluding her letter, Mrs. Hallman indicated that all throughout Central America she had talked to airport personnel who had studied at one time or another at the FAA Academy in Oklahoma City . . . a real tribute not only to the students but to the effectiveness of the Academy and its program.

"AND THERE I WAS . . . ."

Mr. Halaby indulges in a little hangar flying on his recent visit to South America. Accompanied by Civil Aeronautics Board Chairman Alan Boyd, the Administrator flew to Rio de Janeiro to attend the Second Meeting of Government Experts in Civil Aviation, Organization of American States. Enjoying Mr. Halaby's aerobatics are, from left: Minister Jack Kubish, Director, USAID; Brigadier Joelmir C. De Araripe Macedo, Director of Air Routes; Chairman Boyd; Minister Nelson Freire Laverne Wanderley, and the United States Ambassador to Brazil, Lincoln Gordon.

Alaskan Region and Coast Guard Join in Sea-Air Rescue Course

George M. Ross, left, Anchorage Flight Standards office and Lt. Comdr. Alfred Reif, USCG, discuss the Very pistol, an emergency signal that's like a roman candle.

The U. S. Coast Guard in Alaska presented a seminar last Aug. 19 and 20 on water emergency landings and survival-at-sea techniques. The seminar was arranged by FAA's Flight Standards Division for airline companies, the Fish and Wildlife Service and others interested in air-rescue services.

Classroom instruction was conducted at the FAA Regional Headquarters in the Hill Building, Anchorage, each morning. The presentation included emergency communications procedures, landing aircraft under all sea conditions, and the use of emergency flotation gear. Later, the group went to Lake Hood for demonstration of emergency equipment.

YEAR LONG TRAINING BEGINS

A score of FAA administrative-management trainees recently completed a familiarization course at the FAA Academy. It was the first phase of an extensive year-long program to broaden the management outlook of selected Agency personnel. The course covered all major functions of the Agency and furnished the men with knowledge to assess their individual roles in the total effort of the Agency.

The group came from all seven Regions plus the Washington office and the Aeronautical Center. Training was designed to provide an understanding of how the Agency is managed through development of policies, programs and standards.

The course pulled together the operations of the various services of the FAA, wove them into a fabric of the "One-FAA Concept," and showed how the major services and related functions work together to insure the safety and advancement of national and international aviation.

Aeronautical Center Personnel Join Self-Improvement Program

Nearly 50 supervisors, journeymen FAA engineers, and other specialists at the Aeronautical Center completed a program of self-improvement called Project Update, in late summer. A second class of 80 began last month.

The undertaking was spurred by recognition of the fact that working skills can become obsolete because of rapid advancements in technology and increasing sophistication in airways equipment.

The special series of evening seminars were established by officers of the local Airways Engineering Society chapter with the cooperation of the FAA Academy. Volunteer instructors conduct classes which are designed to familiarize participants with new practices, systems and devices currently used, or contemplated for use by FAA, in navigation, communications and air traffic control.

Although supervisors are not necessarily required to be technical experts in every field, they do need sufficient know-how to understand the complex new systems and devices, their operating limitations, maintenance problems, advantages and disadvantages. Project Update helps them to acquire this knowledge.

NEW MEDICAL STAFFER IN PC

Dr. Casimer Jasinski, former aviator and flight surgeon with the U. S. Navy, has been named Assistant Flight Surgeon with the Pacific Region. Jasinski began his medical career in 1949, after five years in the Navy. He is a graduate of San Diego State College and Washington University School of Medicine, St. Louis, Mo. He and his wife, Doris, also an M.D., arrived in Hawaii in 1957. Shortly thereafter he returned to the Navy for a course in aviation medicine, then spent three more years in Navy assignments in California and Guam. He has also served on occasions as FAA relief doctor on Wake. He is flight surgeon for the Hawaii Air National Guard.

FROGS JUMP AT STOCKTON

The FAA recently became involved in the 1964 Jumping Frog Jubilee of Calaveras County, Angels Camp, Calif.

The Jubilee, popular with pilots throughout California, required a temporary tower to serve the many planes expected. The Western Region obliged, and Carl Estep, chief of the Stockton tower, made the arrangements.

SW'S I&M ENGINEERS TO INSTRUCT FIRST AID

Electronic engineers Andrew Y. Kilcrease (left) and Curtis J. Lance use H. Douglas Miller as "training aid."

Six office and field engineers in the Southwest Region's Installation and Materiel Division received certificates as first aid instructors and will train other personnel in the Project Management Branch. Training emphasis will be on certifying resident engineers, electronic engineers and technicians as first aid men.

Earning certificates as instructors after completion of the Standard and Advanced First Aid to the Injured courses were William H. Bingham, civil engineer; Andrew Y. Kilcrease, Charles R. Christine and Oscar A. Rasmussen, Jr., all electronic engineers; H. Douglas Miller, electrical engineer; and Curtis J. Lance, construction representative.

"Penny a Pound" Rates at Paducah Prove Popular

"Penny-A-Pound Day" has become a popular local institution at Paducah, Ky. Once or twice each year, the Ohio Valley Aviation Company at Barkley Field announces a bargain rate for plane rides—a penny per pound per passenger.

Vance Moyer, a former Navy pilot who won the Distinguished Flying Cross twice during WW II, is owner and operator of Ohio Valley Aviation. Last fall he scheduled a special Penny-A-Pound Day to help bring a crowd to the airport for the FAA's Fifth Anniversary.

A number of other airports have tried bargain rates for local flights. Mr. Moyer, who has been conducting his very successful Penny-A-Pounders for the past ten years, reports carrying 37 tons of passengers aloft in his latest effort on May 24, 1964.

At a penny a pound, this tonnage represents $740.

FAA/USAF/INDUSTRY TEAM UP

For the first time, pilots from the Federal Aviation Agency, the U. S. Air Force, and an aircraft manufacturing company, have flown an aircraft round-trip over the United States in a test program. Walking from the C-141A STARLIFTER, *fanjet carrier developed for use as a military airlifter and commercial freighter, are (left to right), Harlan Armitage, Lockheed-Georgia Company pilot; Frank E. McGowan, Southern Region's C-141A Project Group flight test pilot, Atlanta; and Major Dave Benefield, pilot from the Air Force Flight Test Center, Edwards Air Force Base.*

"KISSIN' COUSINS" BLAST OFF IN SAN DIEGO

Darice Tippets, "Miss San Diego," and Joseph H. Tippets, Director, WE, push detonator at groundbreaking ceremony.

A pair of kissin' cousins had a literal "blast" in breaking ground for the new Montgomery Field Airport traffic control tower, San Diego.

Darice Tippets, who is Miss San Diego, and Joseph Tippets, Western Region Director, met for the first time at the recent ceremony.

The blast? Miss San Diego and "Mr. Western Region" each put a hand on a plunger to set off a detonation of powder prepared by a Navy demolition team to dislodge the first chunks of ground at the tower site.

The explosion also sent up two dozen balloons donated for the festivities by the U.S. Weather Bureau.

Tippets and Miss Tippets met just prior to the ceremony. They began comparing notes concerning their identical surnames. It turned out that Tippets' grandfather and Darice's great grandfather were brothers.

"That makes us at least kissin' cousins," Tippets commented.

The singular crossing of paths of the two became the subject for feature stories in San Diego newspapers. *The Evening Tribune* headed its story: "KISSIN' COUSINS — AIRPORT DYNAMITE," and the caption beneath a picture of Tippets and Miss Tippets stated: A Family Blast.

Civil Air Patrol Trainees Fly T-34s at Aeronautical Center

Ten members of the Civil Air Patrol from various areas of the United States completed a two week course of training at the Aeronautical Center last August to familiarize them with new aircraft provided National CAP Headquarters by the U.S. Air Force.

The aircraft were surplus T-34s, long used by the Air Force to train student pilots. This low-wing monoplane has considerably higher performance than earlier planes utilized by CAP. The course was designed to provide familiarization and standardization in instruction techniques in order to promote safety throughout the national CAP organization.

Those attending were all FAA-rated flight instructors. They were given approximately 15 hours of flying time in the T-34, plus classroom work and Link time.

Upon completion of the course they returned to their home towns to establish similar standardization programs for their local wings.

Training was under the direction of T. K. Archer, Chief, general operations branch of the Flight Standards Training Division.

Flight instructors were: Howard Cable, James (Pete) Campbell, Chester A. Davidson, Carl Edmison, all of the flight instructor and instrument section, and James Riley of Richmond, Va., on loan from the Eastern Region.

In all, the Air Force gave the CAP 80 training planes which will be modified at CAP expense in order to be certificated as airworthy by the FAA.

Lost Aircraft Top Requests for Flight Assistance

The new ATS Fact Book (June 30, 1964) lists a total of 3,091 "saves" in FY 1964 by centers, towers and flight service stations. Technically a "save" is an incident which might have resulted in loss of life were air traffic service not available.

Lost aircraft accounted for the greatest number of requests for flight assistance. Next came pilots caught on top of an overcast or in bad weather. Many others were running short of fuel when they called for help and others were in mechanical difficulty of some kind—engine failure, or malfunction of navigational equipment.

Statistically, centers chalked up 502 flight assists during the 12 month period; towers 1,046 and flight service stations 1,543.

FAA'S DEPUTY ADMINISTRATOR SHOWS NAFEC TO AF AND AVIATION VIPS

Atlantic City Visitors Deputy Administrator Lieut. Gen. Harold W. Grant (center left) leads a group of visitors from Air Force headquarters, headed by Lieut. Gen. T. P. Gerrity, (center) DCS for Systems & Logistics, on a recent tour of the Experimental Center. They saw radar video data processing in operation and discussed common objectives in improvements of secondary radar.

In the group are: from left, Air Vice Marshal Ian Esplin, Air Attache, British Embassy; center manager William F. Harrison; Gen. Grant, Gen. Gerrity, Robert J. Shank, Associate Administrator for Development; Joseph D. Blatt, Director, SRDS; and John W. Klotz, attached to R&D in the Department of Defense.

GREATER ROCKFORD MAKES THE BIG TIME WITH ANNUAL X-CRAFT FLY-IN

William J. Schulte, GA-2 (center) with tower controllers Verne Wegner and Richard Smolla at Rockford fly-in.

Birds of a feather flocked together at the annual Experimental Aircraft Association fly-in at Greater Rockford Airport, Aug. 1-9. Among them were this group of European pilots touring the United States flying Piper planes.

For one week each year, the Greater Rockford, (Ill.) Airport is the busiest in the world. It gains this distinction by hosting the annual convention of the Experimental Aircraft Association.

During the period Aug. 1-9 the airport logged 21,612 take-offs and landings. In one day alone it handled 5,529 aircraft movements. Handling all of this traffic was Richard P. Smolla, chief of the Rockford tower and his regular staff. But the Rockford tower wasn't enough. Three mobile towers were set up; four additional traffic control specialists were brought in from Wisconsin, Indiana and Chicago; six people were transferred from the FSS at the airport to the control tower.

The mixture of traffic included homebuilts, vintage planes, gliders, powered gliders, gyrocopters and "store bought" aircraft of all types.

Spectator attendance at the fly-in was estimated at 450,000 by airport and EAA officials. Included in this total were people from almost every state and many foreign countries.

SMS-440 TUBE CLOCKS HIGHEST IN-SOCKET HOURS

An electronic tube that remained in service for 14,058 hours has earned for SMS-440, Klamath Falls, Ore., the 25th Air Division's High Power Tube Award. It was the first time it was received by a civilian agency.

Maj. Gen. William E. Elder, the division's commander, stated that the award was for the highest in-socket radiate hours on the L-3035 Klystron.

The high-power Klystron is used in the FPS-67 radar system at Keno Air Force Station near Klamath Falls, a facility maintained by FAA personnel.

Hervey E. Aldridge, Chief of the Western Region's Systems Maintenance Division, commented, "FAA technicians obtained considerably more hours of operation from this tube than are normally provided by the average tube of this type. Receipt of this award is a tribute to FAA maintenance."

Lieut. Col. Martin P. Alger, Keno Air Force Station Commander, presented the plaque to William J. Tucker, Chief, SMS-440.

Three Albuquerqueans Explore Other Side of Sound Barrier

Personnel at the Albuquerque ARTCC are breaking the sound barrier.

First, George Elliott, a coordinator, flew an F-100 from Cannon AFB, near Clovis, N. M., for his first supersonic experience.

A few days later L. E. Anderson, center chief, and George Brady, facility planning officer, went through the sonic barrier in T-38s at Williams AFB, Ariz.

Both Elliott and Anderson are active in the familiarization flying program.

Last Word in FSS Gets Going in Southwest Oregon

The new North, Bend, Ore., Flight Service Station.

The North Bend, Ore., FSS has moved to new quarters at North Bend Airport.

E. Wallace Knight, chief of the station, was host at an open house at which more than 100 persons toured the facility.

FAA officials present for the occasion were Fred S. McKnight, air traffic supervisor at the Seattle Center, and Claude C. Barrett, Chief of SMDO-4.

The new quarters are located directly on the flight line and have several access doors conveniently located for pilots.

Knight said: "This gives the FSS the potential of becoming the 'front door' for aviation in Southwest Oregon."

EAGLES FOR STARS

When the Deputy Administrator, AL, became Brig. Gen. Ralph G. Taylor, he was "starred" by Director James G. Rogers, left, and Maj. Gen. James C. Jensen, U. S. Air Force.

ON THE SCOPE

TRANSFERS

● *Wendel Bayne* from the Wake Island IFSS and *John C. Enlow*, from the Guam IFSS to the Lihue FSS on Kauai, Hawaii. They replaced *William Clark*, who moved to the Honolulu FSS, and *Tom Robinson*, who transferred to Samoa IFSS. ● *Norman R. Edwards* to the Computers and Displays Branch in I&M, Washington. Replacing him as Assistant Chief, I&M Division at Pacific Region headquarters, is *Robert L. Williams*. ● *William J. Decker* is the new chief of the Salt Lake City Center. He reported to his new job after the Phoenix Center closed in August. ● *Francis R. Buck*, who returned to the Agency last spring after an absence of 14 years, has been named Chief of the Budget Division in the Pacific Region. He had been serving with the foreign air mission in Libya.

EARTHQUAKE CERTIFICATES

George M. Ross, left, FAA Supervising Inspector, presented "Earthquake Certificates" to, from left, Mrs. Allen C. Combs, Mrs. Merrill Mael and Mrs. Everett K. Rains, secretaries in the Anchorage Flight Standards District Office. Agency employees who served with distinction during the Good Friday calamity received certificates signed by Director James G. Rogers, which read "The earthquake disaster which befell our state on March 27, 1964, elicited a heartwarming response from Alaska Region Employees. The FAA is proud of your prompt resumption of duties, and many self-initiated acts of assistance."

OUTSTANDING AT OAKLAND

Glenn L. Simonson Awards for excellence in air traffic control went to Oakland personnel Forrest Fleming, Ken Barton and Bill Bridham. The men, a

coordinator, a controller, and an assistant, received letters of commendation for outstanding work at Oakland during the first half of 1964. Their names were engraved on awards which will be displayed in the Center's ready room. Selections are made by Center personnel. The awards are in memory of a former Oakland Center Chief. Previous winners in the three categories were: Coordinators Dorien F. Meredith and Forest E. Black; Controller Joseph W. Brubaker and Roger W. Varney; and Assistant James E. King and William W. Burnham.

IDEAS PAY OFF IN CASH

Two Pacific Region Air Traffic employees recently came in for some suggestion cash. Joe A. Becera, Honolulu IFSS, was awarded $35 for eliminating a safety hazard, and Wayne E. Leighton, Guam IFSS, was given $50 for developing a color code system for identification of antennas in use.

OUTSTANDING CONTRIBUTORS

Western Region Certificates of Award were presented to Ray J. Haas (left) and L. D. (Pat) Cody (right) for their outstanding contributions to aviation education in the West. Haas has been the Director of the Portland (Oregon) Aerospace Workshop for nine years.

Cody is in charge of all educational activities on the West Coast for the Civil Air Patrol. Gene Kropf, regional public affiairs officer, made the presentation for Director Tippets.

FSS EMPLOYEES RECEIVE PLAQUE

Five EA Morgantown, Ind., employees were presented with a joint plaque recently "in recognition of outstanding service to the Air Traffic Division and to the aviation public." Those receiving the award were: Hulton Schuler; Russell Leeper; Frank Greco; Joseph Ritz; Marcus Levy; Estol Gans; and John Hanlon.

Joseph Ritz is the FAA supervisor of the Cleveland Air Traffic Area Office, and Hanlon is the Cleveland SM supervisor. Gans was cited for taking his own aircraft aloft to guide home lost and crippled ships. Greco was named in four instances for helping to bring in lost planes; Schuler and Levy each brought in one and Leeper, two.

RADAR REPAIR NETS AWARDS

Five of the award winners are, from left: Frederick A. Wong; Kenneth K. Kuroiwa; Arthur W. Park; Charles L. Holden Jr.; and James A. Holmes. Not shown, but also winners were James W. Mitchell and Norman Y. P. Lau. Certificates were presented by Norman Thompson, chief, SMD. Arthur C. Medeiros, SMDO ☆1 points at target.

Seven technicians from the Systems Maintenance Division, Pacific Region, have been given cash awards and Special Act Certificates for their ingenuity in repairing and maintaining a radar target simulator used in the training room at the Honolulu Air Route Traffic Control Center. The simulator, built by Servonics, is one of 25 purchased by the Agency with the knowledge that the units had certain deficiencies. The team of maintenance technicians, working on a time-available basis, and without the advantage of spare parts, managed to get the simulator in operation.

AFTER HOURS

BOSTON-CANADIAN ATC GOLF MEET

The Belle Vue Country Club, Montreal, Canada, established a "first" recently when Montreal air traffic personnel played host to Boston air traffic area personnel, inaugurating what is probably the first annual international golf tournament of its kind.

The ten low scorers of the United States team and the Canadian ten low scorers clashed for a trophy "Challenge Cup," donated by LaBatt's Brewery of Canada. A Galloway system tournament was held for all golfers.

Canadian golfers were proclaimed victors of the International Montreal-Boston Tournament, defeating the Boston team by eight strokes.

Some of the contestants: from left, Richard S. Colman, Boston, Norman Demeza and Walter Griffin, Montreal and Joseph F. Regan, liaison officer NORAD, Newburgh, N. Y.

Individual winners from Boston were: low gross, Leo Nangle; 2d gross, Alfredo P. Casciano, William R. Twomey, Michael G. Melanson (tower); 3d gross, Daniel H. McLaughlin (Boston FSS); low net, Edward J. Brennan; 2d net, Floyd H. Jenkins; most honest golfer (highest score), Joseph R. Martin (Boston center).

After a buffet at the country club and the awarding of trophies and prizes, a guided tour of the city was provided by the Canadians.

A return match is scheduled for next May and current plans call for it to be at the Colonial Country Club in Lynnfield, Mass.

The credit for a successful tourney goes to Earl McDougal, Allen Cunnius and Al Yeadon from the Montreal center and Leo Nangle, Boston center.

CENTER TEAM WINS GOLF TROPHY

Competing against two other Atlantic City teams, a group representing NAFEC recently won a golf tournament award. Three members of the victorious

16-man center team stand behind the trophy: from left, Major C. J. Loisel, traffic control research, had the low net score; John W. Goodwin, air traffic control lab, had the low gross score; and Robert A. Pujda, simulation facilities, came closest to the pin—72 inches—in the hole-in-one contest.

BRADY IS A LEADER AMONG SCOUTS

George Brady's leadership extends beyond his duties as facility planning officer at the Albuquerque ARTCC. A scoutmaster of Albuquerque Boy Scout Troop 88, he was selected for the national Wood Badge training course in which only 52 scout leaders from various parts of the United States were chosen to participate.

This summer Brady was one of the few scout leaders to take his troop to Camp Asaayi on the Navajo Indian Reservation—by an invitation extended by the Navajo Nation.

BOWLING TOURNAMENT IN THE WEST

There's friendly rivalry in bowling between FAA contingents at Sacramento and Oakland.

Sacramento women bowlers display trophies after a one-day tournament. They are, from left, Frances A. Phelps, Jeanne Hancock, Mary Stults and Virginia Imsdahl.

Last year, six teams from Oakland and Sacramento met at Valley, a halfway point, for a one-day bowling tournament.

This year a total of 48 participants and 75 spectators attended. Each team, composed of three men and one woman, bowls on a handicap system and a large trophy is awarded either OAK or SAC as a combined team effort. The trophy was won by Oakland last year and by Sacramento this year.

Individual trophies are awarded on a permanent basis to both men and women bowlers for high games and high series.

Tournament directors last year were Donald Tom, SMDO-8, and George McCarthy of the Sacramento SM Sector. This year the tournament was directed by Marvin Shilling of Sacramento and Gerald Mahdik of Oakland.

"This is a project which brings FAA personnel together on a friendly and personal basis," McCarthy said.

Trophies this year went to, from left, George E. McCarthy and Marvin G. Shilling, both of Sacramento, and Gerald W. Mahdik and Henry E. Bertuleit, both of Oakland.

FRANK W. CAZIER IS PROUD DAD

FAA HORIZONS (August, 1963) reported that the son of Frank W. Cazier, operations inspector at Albuquerque GADO, was named Outstanding Senior Engineer for 1962-63 at the University of Colorado. Young Frank, an aeronautical engineer graduate (1963), won a three-year fellowship offered by NASA at Purdue University.

The Caziers are again beaming—this time because their daughter, Mrs. David L. Hutchins, repeated the educational feat. She was graduated this past June *summa cum laude* from the Ohio State University, named to Phi Beta Kappa and awarded a $2,500 fellowship for graduate work.

ON THE HORIZON

● **Probationary Employees**—A three-judge Federal court tribunal has ruled that Government probationary and temporary employees do not have the right to hearings in cases involving firings, etc. Probationary employees are those with less than one year's service. The court referred to provisions of the Lloyd-LaFollette and Veterans Preference Acts under which specific hearing rights are given to permanent career employees in adverse action cases, but not to probationary or temporary employees.

● **Employee Inventions**—If you've come up with an idea for an invention and are interested in getting patent rights, best you read OA 3450.2 (July 28, 1964). The Agency Order defines an "invention" to mean any art, process, machine, manufacture, design, or composition of matter or an improvement to it.

The seven page order includes such subjects as security, cash awards, how to get free patents, burden of proof and employee's rights.

● **Non-Government Facility Training**—Scientists and engineers employed by the Agency may now be trained in non-Government facilities for as long as two years for every ten of civilian Government service without prior approval of the Civil Service Commission. Previously, the rule was for one year in ten.

● **Hovercraft No Airplane**—Question of the legal status of hovercraft has been settled by the Agency. Any vehicle supported by a cushion of air beneath the vehicle and the surface of the earth or water, yet not able to fly above the limited ground effect reaction (several inches) is not an aircraft. Hovercraft, therefore, will not come under the jurisdiction of civil aviation authorities.

● **Health Insurance Cost Rise**—The Civil Service Commission has announced that 20 of the 38 plans in the Federal Employees Health Benefits Program will have premium rates increased for the fifth contract period which begins Nov. 1, 1964. An unlimited open season has been scheduled from Feb. 1-15, 1965, during which eligible employees may enroll in a plan and enrolled employees and annuitants may change plans, options, or type of enrollment from self only to self and family. This will be the first unlimited open season since Oct. 1961 for annuitants enrolled in the active FEHBP.

In general, the premium increases are in the high options of the plans which provide greater benefits at a higher cost. Approximately 1,783,000 employees will be affected by the rate changes. The premium rates have been held level by participating companies, which have drawn on their reserves to meet benefit payments which, during the current contract year, have generally exceeded premiums.

It was emphasized that the premium increase for each plan is based on its own experience and reflects the rising cost of hospital and medical care. The increases are intended to produce income exceeding benefit payments, with any net gain being used to restore depleted reserves.

● **Airspace Rulemaking.** Part II (New) of the Federal Aviation Regulations authorizes Regional Directors to exercise airspace rule-making authority in terminal areas within the United States. Procedures for following this authority are described in OA 7400.2 (July 27, 1964). Airspace actions that involve any allocation of airspace outside the U.S., will be handled in Washington.

● **Radiological Monitoring Instruments.** Participation in the National Fallout Monitoring Network requires radiological defense organizations at all FAA establishments. To this end the Installation and Material Service has been made responsible for the acquisition, distribution, central repair, calibration and approval of all instruments used in the program; the Air Traffic Service is responsible for establishing the basis for issue of the instruments, and the Systems Maintenance Service for their field maintenance and repair. OA 1900.14A July 8, 1964.

● **Management Telecommunications.** The functional responsibility for developing guidelines and standards for FAA Management Communications requirements has been transferred to the Air Traffic Service, providing a single staff authority in this field. Previously, certain communication responsibilities were split between ATS and OMS. Details contained in OA 1770.4 (July 31, 1964).

● **Conference Guidelines.** Guidelines for planning, scheduling and conducting national conferences have been issued by the Administrator. The order emphasizes the importance of regularly scheduled conferences between regional officials and representatives of headquarters offices. Heads of offices and services are to report their scheduled national conferences to the Executive Secretary (OA-2). Conferences will not be scheduled to overlap or otherwise interefere with a Regional Directors' or Program Review Conference.

HIGH SPEED BRAKE TESTER

Newest addition to NAFEC's experimental equipment is a runway traction measuring vehicle developed for aircraft braking and skid research. It can reach speeds above 100 mph, accelerating from zero to 80 mph in 1,500 feet.

PERSONNEL PIPELINE

NEW DUAL COMPENSATION ACT

The following questions and answers apply to the new Dual Compensation Act, which was enacted Aug. 19, 1964.

Q. What is the effective date of the Dual Compensation Act?

A. The relief provisions are effective upon enactment. All other provisions are effective on Dec. 1, 1964.

Q. In general, what will the Dual Compensation Act do?

A. It codifies all the various laws pertaining to dual compensation and dual employment into one statute. It establishes simplified policies on civilian employment of retired military personnel and on the holding of two or more civilian positions.

Q. What limitation is placed on dual compensation under the new law?

A. The limitation provides that a retired regular officer of the uniformed services who holds a Federal or D. C. Government civilian position will receive the full salary of the civilian position plus the first $2,000 of his military retired pay, plus one-half of any remainder of his retired pay.

Q. Will the retired pay of reserve officers and enlisted men be reduced under the new law?

A. No. Retired reserve officers and all retired enlisted men will continue to be exempt from any dual compensation limitation.

Q. Are any retired regular officers exempt from the dual compensation limitation?

A. Yes. Any regular officer is exempt whose retirement was based on disability resulting from injury or disease received in line of duty as a direct result of armed conflict, or disability caused by an instrumentality of war and incurred in the line of duty during a period of war.

Q. What about retired regular officers who are holding Federal or D. C. Government civilian positions on Nov. 30, 1964, the day immediately preceding the effective date of the Dual Compensation Act?

A. They may elect to come under the limitations of the Dual Compensation Act or continue under whatever limitations, if any, that are applicable to them on the day immediately preceding the effective date of the Dual Compensation Act.

Q. Does the dual compensation limitation apply to a retired regular officer who accepts a temporary, part-time, or intermittent appointment?

A. The limitation does not apply for the first 30 days of such an appointment.

Q. Does the Dual Compensation Act place any restriction on appointing retired members of uniformed services?

A. Yes. A retired member of any of the armed forces may be appointed to a civilian position in or under the Department of Defense during the 180 days immediately following the date of his military retirement only if: the Secretary of the military department concerned authorizes his appointment and, if the position is in the competitive civil service, the Civil Service Commission approves; or the minimum rates of basic compensation for the position have been increased under section 504 of the Federal Salary Reform Act of 1962; or a state of national emergency exists.

Q. What information is required in connection with the authorization?

A. Any request for such an authorization and approval must be accompanied by a statement which shows that: full consideration, in accordance with placement and promotion procedures of the military department concerned, was given to eligible career employees; or if selection is by other than certification from a civil service list of eligibles, the vacancy has been publicized to give all interested candidates a chance to apply; or qualification requirements for the job have not been written in such a way that the retired member will be given an advantage; or the job has not been held open pending the member's retirement.

Q. Does the Dual Compensation Act affect the reduction-in-force rights of retired military personnel?

A. Yes. A retired member of any of the uniformed services who is entitled to veteran preference under section 2 of the Veterans' Preference Act of 1944 will be placed in the veteran preference subgroup of his tenure group for reduction-in-force purposes only if: his retirement was based on disability resulting from injury or disease received in line of duty as a direct result of armed conflict or disability caused by an instrumentality of war and incurred in the line of duty during a period of war; or his service does not include 20 or more years of active military service; or he was employed in a Federal or D. C. Government civilian position on Nov. 30, 1964.

Q. In computing the length of total service for reduction-in-force purposes of employees who are retired members of the uniformed services, is time spent in active service in the armed forces included?

A. If an employee is in one of the preceding categories, his total length of time in active service in the armed forces is included. If he is not in one of these categories, only his length of time in actice service during any war, or in any campaign or expedition for which a campaign badge has been authorized, is included.

Q. Does the Dual Compensation Act affect the crediting of the active military service of a retired member of the uniformed services for purposes of annual leave accrual?

A. Yes. Active military service of a retired member of any of the uniformed services is creditable in determining years of service for annual leave purposes only if: his retirement was based on disability resulting from injury or disease received in line of duty as a direct result of armed conflict or disability caused by an instrumentality of war and incurred in the line of duty during a period of war; or on Nov. 30, 1964, he was employed in a civilian position to which the Annual and Sick Leave Act applies; or such service was performed in the armed forces during any war, or in any campaign or expedition for which a campaign badge has been authorized.

Q. What is the new limitation with respect to holding more than one civilian position?

A. Generally, a person holding more than one civilian position will be entitled to receive basic compensation for not more than 40 hours of work in any one calendar week.

Q. What past laws does the Dual Compensation Act supersede?

A. Over 50 different laws are repealed or amended. Three of these are: the 1894 Dual Office Holding Act, which prohibited the Federal civilian employment of many highly qualified retired regular officers; the 1916 Dual Compensation Act, which prohibited the receipt of compensation from more than one civilian office when the combined amount exceeded $2,000 per annum; and the 1932 Dual Compensation Act, which provided a $10,000 ceiling on combined retired pay and civilian salary.

TECH TALK

SATISFIED CUSTOMERS

The best place to test a new product is in the market place, as any merchant knows, and this is what the Agency did to get "customer" reaction to modifications made in the M-1 en route air traffic control consoles.

Controllers in Cleveland, Ohio, gave the modified consoles high marks during a two-week trial earlier this year and their comments were later echoed by controllers working the sector positions in the Ft. Worth ARTCC after trying out six of the reworked consoles during a 30-day field evaluation.

The improvements were the result of 14 months of experimentation and evaluation in an air traffic control development program managed by SRDS. Participating were members from AT and IM in Washington, with the Eastern, Southern and Southwest Regions cooperating.

Chief guiding hand in the project was George A. Scott, at NAFEC, who worked in close coordination with the Environmental Development Division, SRDS.

The changes made are deceptively simple—backlighting the sector map board at the top of the console, extending the upper control turret over the radar display for better accessibility of communication and radar controls, and improved overall lighting of the flight data positions.

Behind these changes, however, was a great deal of ingenuity and patient examination of every possibility for improvement. At NAFEC the M-1 consoles were turned inside-out by engineers, air traffic control specialists and human factor experts to see what could be done to make them more "livable."

What they came up with led to the decision to manufacture modification kits at the Aeronautical Center which will be installed by Installation and Material Service upon recommendation of the Regional Directors.

This is a "before" view of the work area surrounding the M-1 en route air traffic control consoles. Note "hot spots" caused by external lighting on the map panels.

Leading the way in this direction is Southwest Region Director Archie W. League who reported controller reaction to be "most enthusiastic." His advisory memorandum included a recommendation that all positions in the Ft. Worth, Albuquerque and the new Houston Center be furnished with the modified equipment.

THE TRUTH ABOUT DME

DME—what's it all about? The easiest thing to understand about DME is that it stands for Distance Measuring Equipment. How it measures distance is something else again.

But function it does, and DME has taken its place in aviation language along with such old standbys as VOR and TACAN. TACAN, on the scene since it was adopted as part of the Common System in 1956, is a combined bearing/distance facility developed for and used by tactical military aircraft as its name implies—*TAC*tical *A*ir *N*avigation system.

TACAN has undergone a natural metamorphosis with the addition of VOR to become VORTAC. The Agency's VORTAC program calls for eventual co-location of TACAN with VOR at some 761 facilities in the Federal Airways System.

The distance portion of TACAN is separately available to any aircraft equipped to use it and when so used is generally referred to as DME.

DME makes use of the fact that radio waves travel at a relatively great but still measurable speed which, for all practical purposes is a constant quantity. DME resembles radar in this respect, as well as in its employment of pulse techniques.

It differs from basic radar in that both airborne and ground elements of the DME are active. In fact, the airborne DME initiates the distance measuring transaction by transmitting high-powered, 1 kilowatt interrogation pulse pairs at a search rate of about 150 interrogations per second or a track rate of about 30 per second.

These interrogation rates are designed to be completely random to minimize the possibility that any two aircraft DME units will ever be synchronous over a significant interval of time. Each interrogation received at a ground station initiates a reply, following a specific fixed processing time called system delay which is calibrated out in the aircraft receiver.

To gain attention the ground station replies received in the aircraft must fall into a "strobe" gate which is triggered by each interrogation and moved out in small time increments until synchronous replies are encountered.

When this happens the interrogator switches into the track mode. In track, the strobe gate is designed to sense the relative time of arrival of the synchronous replies and alter the derived distance-analog information as slant-range distance from the ground station varies.

This derived distance-analog information feeds a visual indicator which is calibrated to readout in nautical miles. Maximum range for general aviation DMEs is 100 nautical miles; 200 nautical miles, more or less, for air carriers; and 300 for the latest military equipment.

While DME service is now extracted from the composite TACAN signal in almost every case, the Agency has plans for a specialized DME-only ground station which can be co-located with certain TVOR facilities where there is no military requirement for TACAN. In addition a pilot installation of this DME is now undergoing service test with an ILS on runway 4R at John F. Kennedy International Airport, New York.

YOUR HEALTH ...AND SAFETY

Teflon Coated Frying Pans. Inquiries have been received regarding the safety of using frying pans, stoves, and cooking dishes that have been coated with Teflon. Food and Drug Administration scientists say that they are safe and prove their point in their June 27, 1962 bulletin, *Safety of Cooking Utensils* which is available from the Government Printing Office, Washington, D. C.

Discovery of Teflon was made quite by accident by scientists doing research on refrigeration gases. Working at Dupont's Jackson Laboratory, Carney's Point, N. J., one morning in April 1938, lab technicians found a gas cylinder, supposedly empty, that weighed almost as much as a full one. Inside was a white, waxy solid that, in testing, yielded to no conventional solvent and was not affected by extreme temperatures. This presented a new dimension to the world of plastics.

The new resins were hurried into wartime production, performing jobs in the secret atomic energy development that no other materials could do and contributed to a wide range of defense equipment, including radar. From there they moved into space and finally were put to civilian uses.

Contact Lenses. During recent years the popularity of contact lenses has increased many fold. Most eye doctors have probably seen a number of cases of corneal abrasion resulting from the wearing of contact lenses.

Corneal damage usually results from improperly fitted lenses or failure of the individual to exercise care in the handling and wearing of lenses.

Many times, properly fitted lenses will cause irritation and even corneal abrasions if the individual wears them too long. This frequently occurs when initial wearing time is increased too rapidly or when the individual tries to wear the lenses for a prolonged period after an interval during which they may not have been worn.

Many individuals use saliva to moisten their lenses. Aside from the esthetic consideration, this is an excellent way to invite ocular infection.

Contact lens wearers should follow this code:

The hands should be cleansed with soap and water before insertion of contact lenses.

Initial wearing time should not be greater than several hours and increase in wearing time should be gradual.

If there is an interruption in the daily wearing of lenses of more than two days, the individual should resume wearing the lenses for several hours and gradually increase his wearing time.

Lenses may be worn for prolonged periods if the fit is good and if they cause no corneal irritation, but they should always be removed at bedtime.

Saliva should never be used as a lubricant for contact lenses.

Lenses should be kept scrupulously clean and must be properly cleansed with antiseptic wetting prior to insertion.

Remember, eyes are rationed—two to a customer.

Is Electricity Attracted To You? No, not usually. You have to go out of your way to make yourself attractive to spark its interest.

An electrical current usually seeks only to find the easiest way to the ground. And, fortunately for you, in most cases it's not through your body, since low voltage current finds dry, normal skin to be a poor conductor. Electricity travels much better through good conductors—metal pipes, wires, tap water and damp earth to name a few.

However, if you make your body into a bridge between an electrical source and the ground (or another electrical source) you're in for a rude shock. As electronics men would say, you've completed a circuit. That is, you have shorted yourself out by allowing electricity to run from its source through you to the ground.

To illustrate: Suppose you are using a defective electrical tool or clothes iron and suddenly you feel a slight tingle. This indicates that there's something amiss with the appliance and you're relatively safe as long as you don't ground yourself out on a faucet, radiator or anything else that will complete the circuit to the ground.

If you did hold on to the faulty iron or tool and then touched a grounded object such as the faucet, you'd get a jolt that you would not likely forget. In fact, if the current was sufficiently strong you could pull enough amperes to kill yourself.

You invite the same hazard when you use a defective appliance while standing directly on the ground or on a metal or a damp concrete surface.

How To Avoid Shocks. Today most appliances are well insulated and are safe as long as they are in good condition. When one becomes faulty usually it is because one of the wires is contacting the metal outer shell. If it gives you a slight shock, it's time to unplug. Close inspection will often reveal defects—make them frequently.

An electric cord with an exposed wire also can "bite" you. Don't damage the cord's insulation by tieing it in knots, by putting nails or staples through it or by running it over radiators, under rugs or through doorways. Have frayed cords and broken plugs repaired at once.

Never touch the heating element or internal mechanism of an appliance while it is plugged in. And don't try to play electrician yourself, especially with the TV set. TV voltages are high—about 20,000 volts!—and their capacitors *retain high voltage charges for several hours even after the set is unplugged.*

When buying appliances, look for the label of Underwriters' Laboratories (UL). This assures you that the product has been tested and found free of shock hazard. Be sure that the UL seal appears on the appliance itself and not just on the cord.

Follow the manufacturer's instruction.

SINCE YOU ASKED

FAA HORIZONS welcomes any and all comments from employees regarding any aspect of the Agency. No anonymous letters will be used. Names will be withheld or initials used on request.

• Salute to Palmdale

Palmdale,' Calif., is located in a high desert area and every year has approximately 360 days of VFR flying weather. Even so, the FSS here chalks up a remarkable number of flight assists. In FY63 we had 34; in FY64, 18. The assists have ranged from assisting a pilot carrying a hemorrhaging passenger (a doctor and ambulance were awaiting their arrival), to advising others who couldn't make their destination points before dark. Some pilots are unfamiliar with their VOR equipment and must be told how to use it; others have no VOR equipment or else it is malfunctioning. In either case they have to be oriented on the topography. If they find themselves, they are directed on their ways; if they are distraught they are advised to land at the nearest airport. Personnel of the Palmdale FSS have assisted in apprehending a pilot smuggling aliens in a training plane. (The rear seat and controls had been removed); they stood by with information for another who shot 50 Constellation landings in a single afternoon. Some years ago, when the F-100 was unveiled, it flew over the Palmdale station at an altitude of 50 to 100 feet while *supersonic*. Result: 33 broken windows, two shattered plate glass doors and innumerable split 4 x 4s. Latest unveiling, that of the giant B-70, did no damage at all. Despite all this activity, a coyote occasionally crosses a runway and squirrels chew on the dandelions around the station door.

Clarence I. Cornelius
Chief, Palmdale FSS

Many thanks for sharing this slice of desert life with HORIZON *readers.—Ed.*

• Career Status Explained

Please tell me what is meant by "substantially continuous service" as concerns career appointment in Civil Service.

I understand that three years substantially continuous creditable service is required for career appointment but am not sure about the term or if career appointment in another agency has any bearing.

M.O.J.

Generally, to obtain career status in the Federal Civil Service requires three years of substantially continuous service in a position based on a competitive type of appointment. "Substantially continuous" is described in the Federal Personnel Manual as service with no breaks of more than 30 days in employment. The service must total three years before permanent status is acquired.—Ed.

• Hatch Act

May I wear campaign buttons, use car stickers and otherwise campaign on behalf of persons running for elected office? I am an FAA aviation clerk.

Edith Vernick
WE-GADO-6

The Hatch Act, which restricts certain political activities, affects all Federal employees of the executive branch except policy-determining officials appointed by the President with the advice and consent of the Senate. However, employees may wear campaign buttons and display political stickers on their private automobiles. Additionally, you have the right to vote and to express your political opinions, but you are forbidden to take an active part in partisan political management or in partisan political campaigns. The Civil Service Commission emphasizes that political activity restrictions do not relieve you of your obligation as a citizen to inform yourself of the issues and to register and vote.

Specifically, you cannot run for any office as a party candidate or campaign for any party candidate. You may not run for office, even as an independent, in an election in which partisan political designations are used, unless you live in one of the communities to which the CSC has given partial exemption in connection with their local government. You can attend political rallies and join political clubs, but you cannot take part in the conduct of the rally or operation of the club.

You may not use your auto to take voters to the polls on election day, or lend it, or rent it for this use. However, the employee's auto may be used to transport himself and members of his immediate family to the polls. In addition, members of a car pool may stop at the polling place to cast their votes on the way to or from their places of employment.

A Government employee's wife or husband who is not a Government employee is not restricted by the Act in any way. —Ed.

• FAA and DOD

I saw an article in a newspaper not long ago that said some functions of the FAA were being transferred to the Department of Defense by Presidential order. Is this true, and if so, could you explain it more fully?

A.K.B.

When the Federal Aviation Act was enacted in 1958, it left open a number of questions, among them the relationship between the Administrator of the Federal Aviation Agency and the Secretary of Defense in time of war or national emergency. For five years this matter was under discussion between this Agency, the Department of Defense, the Bureau of the Budget and the White House. The Order that you refer to—Executive Order 11161, July 7, 1964—defines the relationship. It directs the Administrator and the Secretary to make plans for a smooth transfer of Agency functions to DOD if and when the President decides to exercise the provisions of the Order. In such event, the FAA will function as an adjunct of the Department of Defense, with the Administrator directly responsible to the Secretary of Defense. However, the FAA will remain organizationally intact as an operating agency. The Executive Order further requires this Agency to take steps within the authority it now possesses to insure that FAA responsibilities could be met in a period of national emergency short of war. The order did not transfer either equipment or personnel to the Department of Defense.—Ed.

• Promotion Rating Discussed

Last week I applied for a promotion and my supervisor told me he had rated me for the opening. However, he did not discuss the rating with me at all. Isn't he required to discuss this with me?

S. Rodrigues

Your supervisor will undoubtedly talk to you about the rating in the near future. The FAA promotion plan requires supervisors to discuss promotion ratings with rated employees.—Ed.

FAMILY ON THE MOVE

Controller Paul Johnson pulled up stakes at the St. Louis ARTCC and moved to Kansas City and his new assignment. Typical of such a move, the Agency had told Johnson and other personnel at STL (in this case, a year in advance) that their facility was being closed. With this advance notice, Johnson and other FAAers had time to make all arrangements including a move during the summer to eliminate yanking youngsters out of school. Clockwise from top left: Paul reads his orders. • Paul, wife Jean and sons John, David and Tommy (from top) wait for movers. • Bags and baggage loaded and tied down, boys rarin' to go, Johnsons are set to hit the concrete trail. • "We made it," the boys shout during a baggage check stop. • Moving van rolls up to their new home in Ruskin Heights. • Jean's experience comes to light when the first thing unloaded was the TV set. More fun than making a fort in an empty crate, the one-eyed monster keeps boys and new found friends from underfoot. Mission's complete—dad's controlling traffic in Kansas City's ARTCC; mom's in the kitchen and hungry boys are asking for PB&J sandwiches.

FAAers ON THE JOB

Marie A. Harris

For a lady who's working day is a steady procession of one ache and pain after another FAA nurse Marie A. Harris greets the world with a vivacity that makes "going to see Marie" almost a pleasure—if it weren't for the ailment that brought you to her office on the third floor of Washington Headquarters. Once there, however, you know you are in capable, skillful hands; Marie's "bedside manner" is more than half the cure. She acquired the knack early, practicing on her dolls and eventually became a registered nurse after finishing Washington's Providence Hospital in 1933. Marie, a widow, makes a home for her son Robert who entered medical school this fall.

Earl L. Rowe

Airplanes and Earl L. Rowe form a natural combination, like ham and eggs. Rowe, Chief of the Jet Surveillance Section, FS, has piled up 9,500-plus hours in almost everything that flies since donning Naval Aviator's wings in 1944. He's been flying ever since; when not for the FAA he's likely to be scorching the sky as Comdr. Rowe, Commanding Officer, Naval Reserve Squadron VA(J)-861 based at Norfolk, Va. With the Agency since 1958, Rowe, a slim, compact man of 40, has flown everything in the FAA's fleet and looks forward to logging time on the new birds as they are hatched. (Official U.S. Navy photo.)