



Face  
2/4/69

Read:  
'Tower  
on the  
Move'  
Page 2

Vol. 3, No. 3

Published biweekly for employees of the Department of Transportation/Federal Aviation Administration

February 3, 1969

## Lighting Expert Helps Improve Israeli Field

ATLANTIC CITY—A NAFEC lighting specialist has had a hand in assisting one of the world's smallest nations develop one of the world's most modern airports.

Thomas Paprocki spent three weeks recently in Tel Aviv, Israel, on a special assignment to help airport officials there develop a master plan which would qualify Lod International Airport for Category II operation. Category II is a term used to designate airports which are fully instrumented and equipped to bring in planes with 100 ft. ceiling and 1,200 feet RVR.

Paprocki said improvements required at Lod International to bring it to full Category II capability can be completed in about two years. Lighting improvements he recommended included those for high-speed turnoffs, approach and touch-down zones and the runway centerline. He also recommended a

secondary electrical power system for emergency backup.

Paprocki's arrival in Tel Aviv was somewhat of a homecoming. Five years ago he was stationed there with a Civil Aviation Assistance Group. On that assignment, he worked at Lod International Airport for 14 months supervising installation of airport lighting and visual navigation aids.

During Paprocki's recent stay in Tel Aviv, the airport suffered a major setback when the terminal building was gutted by a blaze started by a spark from a welder's torch.

"Israel, about the size of New Jersey with a population smaller than that of the city of Los Angeles, is preparing its airports for the age of jumbo jets and SSTs," said Paprocki. "Israel's work toward the achievement of Category

(Continued on page 7)



### Israel Memento

A polished replica of a flare pot used at Tel Aviv's Lod International Airport before modern lighting was installed five years ago is Thomas Paprocki's treasured souvenir from Israel. A plaque on the flare pot cites Paprocki for his assistance to the Israel National Air Navigation Plan.

## New Branches Formed In Air Traffic Service

By Theodore Maher

WASHINGTON—Two new branches—Automation and Manpower Systems—have been set up within the Air Traffic Service.

The Automation Branch will establish requirements, develop plans, evaluate systems and review progress in all ATS automation programs.

"We did not acquire a lot of new people, but coordinated the efforts of people already working in this field," said Robert Lee, Chief of that branch. "They will be working on automation full time."

Among the responsibilities of the new branch is seeing that new hardware will do the job for the air traffic controller. Automation Branch personnel will set requirements and assist those writing specifications for new equipment. In short, they will tell engineers what the equipment must be able to do.

The new branch intends to provide close support for Facility Data System staffs in the field.

"Our job is to give cohesive force to programs already operating and to new programs being planned," Lee said. "We will concentrate on working with today's new IBM 9020 computers, but will also be looking at 'Phase B' programming, including (mid-air) conflict prediction and resolution systems as they come into use."

### To Affect Manpower

The new Manpower Systems Branch will devise and coordinate programs affecting many facets of an ATC specialist's occupation.

According to Branch Chief Jerome Biron, the new branch's first responsibility will be to assure that the ATC specialist training program at the Academy and in the field meets system needs. This responsibility will be carried out in conjunction with the Office of Training.

Requirements for practical, professional training given to new specialists at the Academy will be handled by the new branch. Ultimately, Manpower Systems will evaluate this training and, working closely with the Academy, may see that course content is modified.

Manpower systems will be concerned with a broad spectrum of considerations affecting the ATC specialist, including his pay, his health, his proficiency, his duties and his overall welfare.

A special concern of the branch will be career planning for ATC specialists, in conjunction with the Office of Personnel.

### A New Pattern

"We want to create a new pattern of career development," Biron said. "We will suggest courses and show ATC specialists how to follow them if they choose to do so. However, there is nothing mandatory about this. And, of course, we can't give any guarantees, but our suggestions will be realistic. We feel that development of this program will have a definite influence on our hiring and training practices."

An area in which the branch will assume total responsibility will be in establishing minimum standards on ATC specialist proficiency for both civil and military personnel. Once a specialist meets these standards and takes a test administered by the Academy, he will be awarded an Air Traffic Controllers Specialist Certificate. This certificate will eventually replace the Control Tower Certificate, the ATC Specialist Certificate and the various forms used by the military.

"Our overall job will be to serve as a focal point within the Air Traffic Service concerning personnel and training matters affecting air traffic control specialists throughout the United States," Biron said.

## Texas-Chile 'Heifer Haul' Spans 6,280-Mile Trail

FORT WORTH—Rip-roaring Texas cattle drives have not ended—they've just been speeded up.

Recently, the nation's biggest aerial "trail drive" began at Greater Southwest International Airport and ended 15 jet hours away, in Punta Arenas, Chile. And FAA inspectors were on hand to "ride herd" on the operation.

Instead of being driven along dusty trails, the 262 jet-age Polled Herefords travelled the 6,280 miles to their new range in air-conditioned comfort aboard a stretched DC-8 at speeds up to 550 miles per hour. Stops were made in Panama and Lima, Peru.

Observing loading operations here were four Southwest Region air carrier inspectors: Louis Mallernee, DC-8 flight operations; Ted

Alkire, B-707 flight operations; and Glen Schroeder, maintenance inspector, all of the Dallas ACDO; and George House, maintenance inspector, Fort Worth ACDO. They checked all aspects of maintenance, the manner of loading, special fixtures for the cattle and the configuration of the load.

### Flight First of Several

Between 6,000 and 7,000 Polled Herefords will eventually be airlifted to Chile in a \$2.2 million transportation package. The cattle are to be used as breeding stock by Chilean ranchers who will establish and build a livestock industry.

The Trans-International stretched DC-8, which carries 251 passengers plus crew, was converted in eight

(Continued on Page 7)



### Rudolph Honored

Acting Administrator D. D. Thomas presents Meritorious Service Award to James Rudolph, Director, Flight Standards Service, for his "exceptionally meritorious service in the furtherance of aviation safety both nationally and internationally." The recent honor also was conferred on Rudolph in recognition of his success in "setting a high standard of excellence in the productivity, efficiency and economy of public service and for superior leadership above and beyond the requirements of his routine duties."

## Jet Piloting in Storms OK

By Irv Rippes

JOHNSVILLE, Pa.—Currently prescribed operating techniques for jet transports encountering severe storm turbulence are in general the best available, according to a report on a joint study conducted by the FAA and the U.S. Naval Air Development Center here.

The report, "A Dynamic Simulation Study of the Sweptwing Transport Aircraft in Severe Turbulence," confirmed that pilots using the currently recommended "fly attitude loosely" techniques, experience lower "G" forces, lower MACH (velocity), angle-of-attack, and altitude excursions than those who flew attitude with tight control.

More than 100 airline pilots, representing most of the U.S. air carriers and five foreign carriers, participated in the study.

The test vehicle used was an instrumented mockup of a Boeing 720 cockpit mounted upon a hydraulically-activated "shake table" inside a 50-foot centrifuge.

A control computer containing programmed B-720 aerodynamics data and motion equations "commanded" the centrifuge, reproducing a variety of accelerations to bring about sudden changes in flight path, speed buffets, and stall situations. To create atmospheric disturbances, a series of actual storm recordings was included into the programmed data and activated at preselected points in the flight plan.

In addition to confirming the validity of currently recommended storm penetration techniques, the study also dramatically proved the value of a simple turbulence flight director providing velocity and angle-of-attack command information.

Copies of the report, AD 845 095L, are available from CFSTI, Springfield, Va. 22151, at \$3.00 a copy.



### Airborne Corral

Extending for 143 feet, the cabin of the Stretched DC-8 starts taking the first of 262 cattle. Partitions keep cows in place and fans blow air of desired temperature to control action of the cattle.



Members of the Berg and Henn Company's crew lay the landing mat of two-inch elm planks upon which the load was moved.

# Tower on the Move

## 'Permanent' Airport Structure Is Transported Almost a Mile

*Photos courtesy Airport World Magazine*

What do you do when, because of a runway extension, a permanent air traffic control tower is deemed to be in the wrong location?

One answer would be to tear down the old tower and build a new one on a better site. This would be the expensive way to handle the problem, the Winnebago County Airport board at Oshkosh, Wis., decided. Instead, the board asked for bids to move the 880-ton brick, steel and concrete structure to a new site almost a mile away.

Despite a spell of miserable weather, the 65-foot-high tower, built in 1962, was moved without mishap in a little more than a month.

While the permanent tower was out of commission, controllers utilized a self-contained portable tower to keep traffic flowing smoothly.

Relocation of the five-story, 37-foot by 50-foot structure was a monumental task requiring months of planning and preparation. It is considered to be the largest structure ever moved.

Although some special equipment had to be developed before the job could be started, hardware used was essentially the same as that required for any structure-moving job, only it was heavier and more powerful. Steel beams on which the structure rode were larger and more numerous. Jacks used to lift

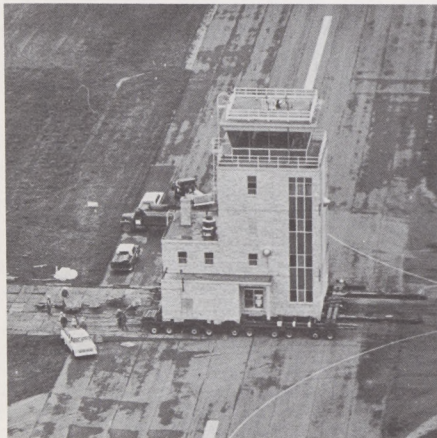
the building were also more numerous and more powerful.

After a special roadway had been graded and rows of steel girders slipped under the structure, the tower was raised 48 inches above ground level. Thirty dollies, each with eight wheels, were then rolled into place under the carrying beams. The tower was then winched ahead 30 feet at a time by heavy-duty trucks.

The move was completed in mid-October and the facility became fully operational at its new location on Dec. 17. Moving the tower, rather than building a new one, saved an estimated \$100,000 for Winnebago County.

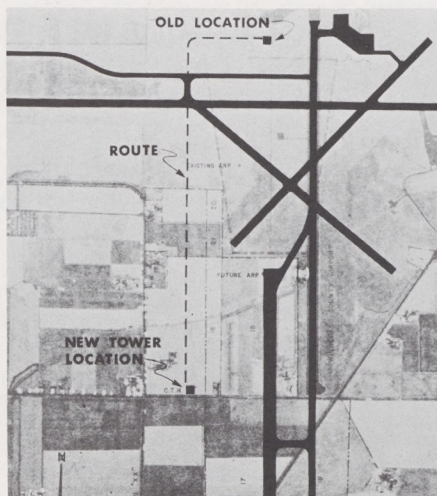


Tower on the move—note earth pile on the right which resulted from grading the haul road. Moving contract called for restoring land configuration when move was finished.



Enroute to its new site, Oshkosh Tower crosses the east-west runway of Winnebago County Airport. A dolly frame and 240 pneumatic tires support the five-story, 880-ton structure as four- and six-wheel-drive winch trucks pull the frame. A special clay-plywood roadbed lies ahead.

*FAA Photo*



This photo shows the route traveled by the tower on its 4,600 foot journey to the new site.



Tower of the Winnebago County Airport prior to its change of location during the summer and early fall of 1968.

# FAA Boosts Aviation in Boonville

By Gene Kropf

BOONVILLE, Calif. — Despite what sometimes seemed to be overwhelming obstacles, the Anderson Valley High School, with only 116 students, set up an aviation flight and ground training program which would be a credit to a much larger institution. The FAA helped make it possible.

Now in its second year of operation, the school has two Cessna 150s, two Pratt & Whitney R985 engines, complete with props; a partially-restored 1939 Aeronca and a new hangar. Aurelio Nofi, Chief, Ukiah FSS, is serving on the Citizens Vocational Advisory Committee and has invited the students to visit the station on a two-at-a-time basis. John Zentner, Supervising Inspector, Oakland GADO, has also assisted on the project and has high praise for the program.

A little over a year ago the new school, recently completed, had a runway in its "back yard" and an aviation-minded superintendent but very little else.

### Money Needed

How to pay for aviation courses was a real problem. The school district, in a rural area in the Northern California mountains, could not help. But the Mendocino County Schools office lent a hand. That office contacted a firm in Southern California, which thought enough of the idea to provide a 1962 Cessna 150.

This solved the first and apparently greatest problem. But finding a certificated flight instructor with the required teaching credentials was not easy. However, with the help of the State Department of Education and an organization known as "The Flying Educators," it was done.

John Merriman, a flight instructor from Torrance, Calif., was interested in the job. He had 300 hours of flight instruction time and the teaching credentials. At the same time Larry Johnson, a certificated A & P mechanic with a teaching certificate, was also located.

Altogether, 24 students signed up for the flight program. Of these, 21 enrolled in the ground school and 21 in the A & P program. These future mechanics had a very realis-

tic mission: keep that Cessna 150 flying.

This they did. More than 600 hours of student flying was logged without incident during the first year. Students performed the 50-hour checks, 100-hour checks and periodic inspections. They also made fabric models, did engine work and bought, stored and filtered gasoline. The last was necessary because there was no gasoline pump on the rudimentary strip. All gas had to be strained through a chamois.

### No Absenteeism

Students schedule flying time as regular classes, one hour a week at \$2.75 per hour, dual or solo. Of the 12 flight students who started last fall, ten have soloed, including two girls. Among these students, absenteeism was practically zero. During more than 100 hours of solo flying, no classes were cut, and discipline problems were unheard of.

Highlighting the first course was "Aviation Career Day," held last spring. Key speakers were Don Fandre from NASA and L. D. (Pat) Cody from the Civil Air Patrol. Representatives of various phases of aviation led students in small, aviation career discussion groups, and representatives of the Navy, the State Department of Education and the FAA flew in for the day.

Something big had happened not only in Boonville but all over the state. The word began to get around. The California Aerospace Education Association awarded Anderson Valley High School their top prize for initiating the program. The very practical first prize, a brand new, fully instrumented Cessna 150, was delivered to Boonville this fall. The plane, donated by Pacific Aeromotive Corp. of Burbank, was delivered painted in the school colors. The little airstrip at Boonville has earned its place on the aviation map.



### General Aviation Boosters

At top, keys to a new Cessna 150 are presented to Bonnie Sellers, student body president, by Harry Noblett, of Pacific Aeromotive Corporation, as cheer leaders look on. In the bottom photo, leaders in the aviation program at Anderson Valley High are (left to right) Ray Nofi, Ukiah FSS Chief; Edward Nickerman, Director, Vocational Education; John Zentner, Oakland GADO; and Mel Baker, School District Superintendent. The aircraft, since destroyed in a hangar fire, was insured and has been replaced.



### Back-up Tower

FAA's Stephen E. Smith presents keys to a new two-man mobile runway supervisory unit to Col. Allen McDonald, vice commander of the 388th Tactical Fighter Wing, as fellow officers look on. Smith is a FAA technical assistance adviser to the USAF under NAT-384 Project. The portable tower, located at the Korat Royal Thai AFB in Thailand, contains the most advanced equipment available and will provide back-up support for the base control tower.



### 749 Years of Service

Washington National Airport employees shown above represent 749 years of Government service—an average of 26.7 years per employee. The airport's manager, Tex Melugin (center), presented 35 year pins to John Roman and Andrew Taylor. Thirty-year pins went to Alfred Cornfield, James Fling, William Houston, Carroll May, Glenwood Moore, Arthur Scott, John Sudol, Horace Tucker, Elizabeth Turner, Jesse Turner, William Blackwell, William Butler, Otto Evans, Jack Grubbs, George Krout, James Porter, Charlie Poston, Ira Rorabaugh, William Smith and Arnold Starr. Receiving 15-year pins were Nathan Bove, William Bridgeman, Floyd Bromley, Dean R. Cooper, Willie Fredette, Leroty Gobbett and Mildred Spransey. Also in photo are new retirees Roy Longanecker, John Sualich and Jess Taylor.

# Aviation Career Briefings Given to Minnesota Scouts

MINNEAPOLIS — "Career Opportunities in Aviation" was the theme of a successful two-year program recently completed by the first Explorer Scout Post to be sponsored by a FAA office or group. The Post, appropriately designated Explorer Post 707, was sponsored by the Area Office here.

Because of enthusiasm generated by the initial program, local FAAers sponsored the post for another two-year period.

Early this fall, several FAAers who served as committee members of the Post volunteered to contact high school boys in the 10th, 11th and 12th grade age group to explain activities of the Post and outline the contemplated program.

### Recruiting Participants

Participating in this recruiting effort were William Ramsey, Assistant Area Manager, who serves as Institutional Representative of the Explorer Post; DeLos Keech, airports engineer, who serves as Post Advisor; and the following committee members: Martha Manion, of the Area's administrative staff; Dick Walch, Assistant Chief of the Minneapolis Center; and Jim McMillen, procedures specialist at FIDO-52.

The recruiting effort paid off as 51 boys from six Twin Cities high schools attended the first meeting and showed interest in joining the Post. Robert O. Ziegler, Minneap-

olis Area Manager, welcomed the youngsters and explained the organization and mission of the FAA, as well as the objectives of the Post. Slides and a film strip entitled "Aviation, Where Career Opportunities are Bright" were shown.

At the next regular meeting, Lowell (Bud) Morris, Chief of the Minneapolis Area AT Branch, presented a program on air traffic control towers. Thirty-six boys were present to hear him explain the functions of the control tower and the role it plays in aviation safety today. During a question and answer session that followed, considerable interest centered on career opportunities in aviation in the Twin Cities area.

After the meeting, the would-be explorers were treated to a tour of the Minneapolis-St. Paul International Airport Control Tower, which gave them an opportunity to observe first hand operations in the tower cab and radar room.

Working with the Explorer Scouts this year as committee members, in addition to those already named, are Gene Campbell of the Minneapolis Center and Edward View of the St. Paul Tower.

If the first Explorer program is any indication, there is every reason to believe the next year will be an exciting and productive one for Explorer Post 707—for both the scouts and the FAAers that help make it all possible.

# 'Giant of a Man' Praised by Pilot

SANTA BARBARA — A FSS specialist here who helped a pilot through deteriorating weather to a safe landing seemed much more than just a voice on the radio—the grateful pilot considers him "a giant of a man."

In a letter to the FSS, the saved pilot stated: "This letter is written to a giant of a man who was on duty Oct. 29 at the hour 0030Z. On behalf of three passengers and myself, I wish to extend our appreciation for your 'heavenly sent'—and I use the term literally—DF steer to Santa Barbara Airport. Your masterful, unbelievable competence, patience and psychological control during what was a most unnerving experience gave us confidence and assurance. No amount of applause can properly appreciate your service to aviation; however, let me extend our standing ovation to you for the duration of my flight life."

The "giant of a man" on duty was specialist Orville A. Beck.



# HORIZONS

FAA HORIZONS, the official employee publication of the U.S. Department of Transportation, Federal Aviation Administration, is published biweekly by the Employee Information Division, Office of Information Services, FAA, 800 Independence Ave., Washington, D.C. 20590. Telephone: WO. 2-5575. Articles of general interest to employees should be submitted directly to Regional FAA Public Affairs Officers: George Fay, Alaskan Region; Robert Fulton, Eastern Region; Jack Barker, Southern Region; Joseph Frets, Central Region; K. K. Jones, Southwest Region; Eugene Kropf, Western Region; George Miyachi, Pacific Region; Edwin Shoop Jr., NAFEC, and Mark Weaver, Aeronautical Center.

Acting Administrator	DAVID D. THOMAS
Director, Office of Information Services	CHARLES G. WARNICK
Chief, Employee Information Division	CLIFFORD CERNICK
Layout/Production	GERNOT RASMUSSEN

John Engelbach (center), accepts a Sustained Superior Accomplishment award from his boss, Ed Simon, Chief of the Airway Facilities Sector. Waiting to congratulate Engelbach is Joe Helvink, West Sayville transmitter site supervisor.

## Not Perfect... But Darned Close

By Frank Puglisi

The expression, "He came with the lease," could have been coined with John Engelbach in mind.

When the CAA took over a high-powered transmitter site in the eastern Long Island community of West Sayville back in 1939, Engelbach was among the first to be hired to maintain the weather information broadcasting facility.

He has been on the job there ever since, to everybody's satisfaction. Now 61, Engelbach could stay on another 30 years so far as his two supervisors, Ed Simon and Joe Helvink, are concerned. Simon, Chief of the AFS, and Helvink, Chief of the site itself, consider Engelbach "the greatest."

"John's chief job is to maintain the site's two 250 KVA diesel engine generators," Simon said. "He keeps them in beautiful condition. But he's also responsible for all other maintenance duties, including landscaping. This, in itself, is something to see. John's a true artisan in everything he does."

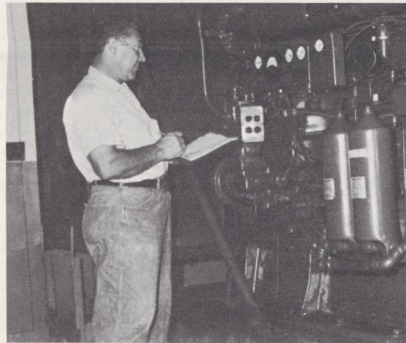
Helvink agreed wholeheartedly. "John is of the 'old school,'" Helvink said. "He does everything to perfection and takes great pride in his work."

Originally, Engelbach was employed as a rigger and climber, working on the facility's many antenna towers which rise to a height of 500 feet or more. His agility became legendary.

"Many times I used to bring my lunch with me," Engelbach recalls. "Half way up, I'd stop to eat. I never dropped a crumb." At 61, he contends he can still outclimb any man 40 years younger.

The transmitter, built by a German corporation in 1912, was surreptitiously used to send clandestine messages to Berlin during the first World War. Now, it is used to transmit Free World weather information to ships at sea and aircraft over the ocean.

This information comes in via telephone from the Weather Bureau at Kennedy International, then goes out from the West Sayville site, which has a transmitting power of 50,000 watts. The site guides Europe-bound aircraft to their destination via voice



Engelbach takes readings from meters on one of the two 250 KVA generators used for standby power at the transmitter site.



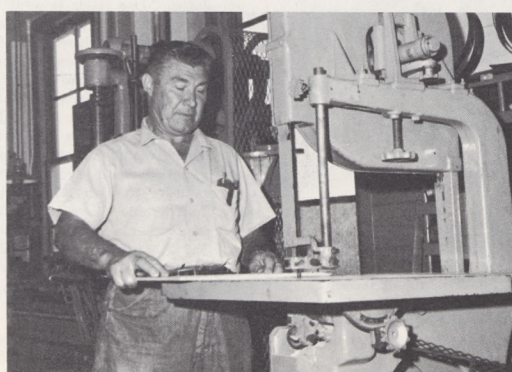
Nothing at the West Sayville transmitter site escapes Engelbach's attention. Here he replaces a burned out bulb in a light post along the road leading to the facility's main building. In background is the residence Engelbach called home for 28 years.

broadcasts transmitted from the International FSS at Kennedy International. The guidance is provided from the time aircraft are about 200 miles from shore until they are within range of communications ships stationed in the Atlantic.

"We take great pride in this facility's ability to operate without interruption," said Helvink. "Again, we must attribute this mainly to John Engelbach, certainly one of the most dedicated employees we have ever known."



Repairing a vacuum condenser, Engelbach uses a repair kit jig of his own design. The kit was submitted as part of the Employee Suggestion program and is expected to be adopted for agency-wide use.



Engelbach cuts a metal plate on a band saw in the transmitter site's machine shop. He arranged for purchase of all the equipment in the shop, which was procured as surplus property from other federal agencies.



### Production Authority

Flight Standards Division representatives recently awarded an FAA certificate to AVCO-Lycoming, of Charleston, S. C., granting AVCO authority to manufacture its second jet engine for helicopter use. Participating were (left to right): John Vogel, Chief, E&M Branch; C. E. Juncker, Staff Manufacturing Specialist; Gordon Becker, Chief, Flight Standards Division; E. S. Fisher, AVCO Program Coordinator; E. W. Allen, Chief, AVCO Quality Planning; Walter Chapman, Manager, AVCO Product Quality; and J. B. McLaughlin, Supervisor, Manufacturing Group, Atlanta EMDO.

## Flight Standards Meet Draws 130 from Field

ATLANTIC CITY—More than 130 Eastern Region field representatives gathered here recently for the sixth annual Flight Standards Division conference.

Among those attending the three-day meeting were Oscar Bakke, Acting Deputy Administrator; George M. Gary, Director, Eastern Region; Col. Frank Gerard, New Jersey Director of Aeronautics; and the following Flight Standards representatives from FAA Headquarters: Woody Mundy, Herbert H. Slaughter, Harry Turnpaugh, Joseph Ferrarese and William G. Shreve, Jr. Aeronautical Center representatives included Ralph Hare and Joseph Manning.

Keynote speaker Harry Bernard, Chief, Eastern Region Flight Standards Division, emphasized the need to continue to improve services despite heavy workloads and the need for an expanded work force.

The Aircraft Management Branch highlight of the conference was the Signal Evaluation Airborne Laboratory (SEAL) project briefing and orientation flights.

During the Operations Branch discussion, considerable attention was given to the new FAA regulation requiring air travel clubs using large planes to meet certification and operations rules similar to those governing commercial airline operations.

A free exchange of ideas took place on the new philosophy and technical changes regarding the recently published Compliance and Enforcement Handbook 8030.7.

Maintenance Branch sessions were devoted to explanations and open discussions of air taxi certification, field approval of repairs and alterations and the maintenance analysis center. Current Washington programs were examined during the Engineering and Manufacturing Branch sessions.

The Systems Worthiness Analysis Program was explored in a question and answer session.



### You Can Bank on Him

During the past five years, Thomas Neville, Jr., Alaskan Region maintenance foreman at Anchorage International Airport, has donated 21 pints of blood to the Blood Bank of Alaska — the equivalent of the amount of life-saving substance he is shown holding. Neville was among the 275 donors honored at a banquet held by Anchorage merchants.



### Instant Texan

"Naturalization certificate" dubbing him an "Honorary Texas Citizen" is presented to Oklahoman Frank Jamison (right), Chief of the General Aviation Unit at the FAA Academy, by Charles Murphy, Executive Director of the Texas Aeronautics Board. The award, in recognition of Jamison's work with the Commission in conducting aviation seminars, was presented during the annual State Aviation Directors-FAA conference in Fort Worth.

## FAA, AF Push 'Peace Bird' Effort

OKLAHOMA CITY—Frequent cropping into conversations these days in FAA logistics channels at the Depot here are such names as "Peace Eagle," "Peace Falcon," "Peace Parrot" and "Peace Mynah." Most of these projects, named after our feathered friends by the Air Force, are joint USAF-FAA endeavors.

The FAA buys, installs and flight checks various types of navigational aids requested from the Air Force by foreign governments under the Military Assistance Program.

A typical project is "Peace Parrot." In this case, the FAA will furnish, install and check two radar approach control systems at Shiraz and Shahrokhki bases in Iran.

Shahrokhki is a military base and Shiraz a joint-use base. The basic

systems to be provided—the ASR-5/PAR-2 radars with supporting control packages—will provide all-weather approach control facilities similar to those in use at both civil and military high-traffic bases in the U. S.

This project started with a request from the Government of Iran to the Air Force for a feasibility study. Subsequently, a site survey in Iran was made by Eugene Parlata, radar specialist, and Charles Stratton, air traffic control specialist.

The PAR-2 systems needed for this project were being phased out by FAA but were still installed in their original locations—Indianapolis and Dallas.

Through the cooperation of the Central and Southwestern Regions,

arrangements were made to refurbish transmitter equipment at the site.

Regional personnel assisted FAA Depot crews in accomplishing this work and the equipment was then moved to Oklahoma City where it was picked up by Imperial Iranian Air Force C-130s.

Program managers in Washington for these projects are Col. Elroy Schwarze for the Office of International Aviation Affairs and Stanley Fink for the Logistics Service. Project manager for the FAA Depot at Oklahoma City is Kenneth Reed.

To date, more than five million dollars in supplies, services and equipment have been supplied to the Air Force by the FAA for these projects.

## 'Operation Gray Sky' Packs 'em In

SACRAMENTO—For the fifth consecutive year, "Operation Gray Sky," a special winter flying briefing program, has drawn a record crowd of pilots and aviation enthusiasts. Held in the Pacific Telephone Company's new auditorium, the four-session program drew an audience which totaled 1,514.

Sponsored by Chief H. H. Mark and his staff at McClellan RAPCON and presented with the cooperation of the Sacramento Valley Pilots Association, Operation Gray Sky was the forerunner of a number of pilot briefing programs such as the popular "Rain Check."

The first of four evening sessions covered functions of the FSS and broad FAA services available to pilots. Representatives of Airway Facilities explained their services and contributions to flight safety. Tips were given on how to get the most out of FAA ground navigational equipment and how to use airborne equipment to the best advantage.

### Safety Tips Given

The second evening was devoted to general aviation safety. This program included preflight aircraft inspection and general tips on winter flying, aircraft operations, airworthiness, inspections and licensing. Density altitude—an important consideration in this area, because many flying trips are made to the mountainous Lake Tahoe area—was also discussed. A comprehensive briefing on aviation medicine was presented by a local Aviation Medical Examiner and long-time area pilot. He discussed psychological and physiological aspects of flying, including hypoxia, anoxia and general pilot health.

An explanation of Sacramento Approach Control and services available from McClellan RAPCON highlighted the third evening. Presentations covered practices in the general Sacramento area, along with specific procedures at Sacramento Municipal and Metropolitan Airports. A Weather Bureau representative discussed local weather conditions as they apply to the general aviation pilot.

Search and Rescue procedures were covered in the last session. Items on the agenda included emergency procedures, survival techniques and advantages of filing a flight plan. The evening concluded with a general explanation of the function of Search and Rescue and the close cooperation existing

among the FAA, the military, the Civil Air Patrol and law enforcement agencies.

A well-known local television personality spoke on weather in relation to mountain and valley flying.

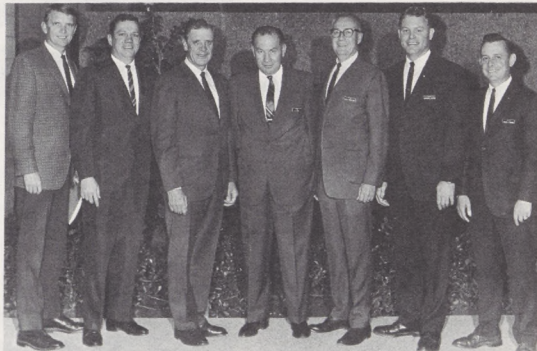
At the conclusion of "Operation Gray Sky-1968," all program speakers appeared onstage to answer questions. Special certificates were presented to those participating in three or more sessions.

### Cockpit Reference Handout

Included in handout material was data on the Sacramento Terminal Area and heavy traffic routes,

an ideal cockpit reference pamphlet. This color-coded pamphlet depicts the heavy arrival and departure traffic flows in the metropolitan Sacramento areas and calls attention to areas where pilots must be particularly alert for high performance aircraft movements.

Largely responsible for the pilot briefing programs of "Operation Gray Sky" were: Hank Mark, Local Coordinator; Bob Harrison, a McClellan controller, and one of the originators of the program, who suggested the name; and Watch Supervisor Dale McCulloch, who produced the 1968 "Operation Gray Sky" program.



### Program Luminaries

The FAA foursome at top, active in "Operation Gray Sky" programs out west, are (left to right): Robert Markwith, Chief, Sacramento Metro Tower; Jerry Snedeker, tower controller; Victor Katz, acting chief, Sacramento Tower; and Douglas Mott, controller. More stars of "Gray Sky," from McClellan, Calif., RAPCON, pictured at bottom are (left to right): Bob Harrison, controller; Gene Monohan, crew chief; G. R. Ames, assistant chief; H. H. Mark, Chief; Dale McCulloch, watch supervisor, and controllers Larry Morton and William Kennedy.



At left, an agency DC-3 skims saw-toothed ridges in the Sierras to pinpoint simulated crash location on the ground during second day of special exercise in Northern California. Below, signals from "crash site" are quickly picked up on the plane's communications panel. Chuck Harmon is at controls.



## The New Call of the Wild

Since 1957, 36 light aircraft have been swallowed up within the West's 916,000 square miles, leaving no trace of either the planes or the 69 persons aboard.

Many of these unfortunate pilots and passengers, it is believed, could have been rescued if the planes had carried a simple device which emits a series of radio pulses—an electronic lifeline known as a crash locator beacon.

Understandably, the Western Region has taken a lead in exploring the usefulness of these life-saving devices. Beacon tests were conducted last year at Aspen, Colo. and Las Vegas. The most recent in the test series took place in Northern California's rugged, desolate mountain country in the vicinity of Red Bluff.

Much of the Sierra's skyscraping terrain was obscured by a solid overcast during the two-day test period. To simulate a downed aircraft, a crash locator beacon was "ditched" in a deep, heavily-wooded box canyon west of Redding.

As in previous tests, results in this instance were remarkably good. One of two agency DC-3s engaged

in the exercise homed in on the chirping distress signals within ten minutes. The other pinpointed the crash site in 15 minutes. Civil Air Patrol pilots were able to spot the site within an hour.

At one point in the test, the simulated emergency became an actual one when the pilot of a light twin-engine aircraft approaching Red Bluff experienced difficulty with VOR receivers on the plane. The pilot was guided in to a safe landing at Red Bluff by a DC-3 piloted by Curt Whallon, with Richie Phillips as co-pilot and Chuck Harmon manning navigation equipment aboard.

The four-pound, battery-operated beacon tested in Northern California emits a distinctive two-tone signal which can be picked up for 48 hours or more. The beacon's range varies from 50 to 225 miles, depending on the location of the crash and the altitude of search aircraft picking up the signals. Transmissions from the beacon can be received on two radio frequencies—one civilian and one military.

Search planes carrying Direction Finding equipment can home in on the beacon and fly directly to

the vicinity of the crash site. Aircraft without DF equipment can also pinpoint the crash site by flying a search pattern and following the audible signal which strengthens as the plane approaches the transmitter.

J. Chester Shimp, Chief of the Western Region's Aircraft Management Branch, has been in charge of the series of tests. He points out that there is a 12-hour critical period following an air crash during which the likelihood of survival is greatest. After 12 hours—because of exposure, lack of medical care and the presence of wild animals—the prospect of survival drops sharply.

Because a crash locator beacon can bring rescuers to the wilderness crash scene well within the critical 12-hour period, Shimp feels that the exhaustive beacon tests being conducted in the Region are more than justified.

Meanwhile, the emphasis is on filing flight plans, because unless a flight plan is filed, rescue operations cannot be set in motion promptly—increasing the odds against surviving a crash in remote areas.





Simulated crash site, though in a remote canyon west of Redding, Calif., is ferreted out electronically by FAA aircraft miles away and above a thick overcast. Among crew on the ground is Keith Lindell, a representative of one of the firms which makes locator devices.



In photo above, co-pilot Richie Phillips (left) and aircraft commander Curt Whallon get briefing and file flight plan at Red Bluff, Calif. FSS for scheduled DC-3 locator beacon exercise. During test (at left) a real emergency occurred when another twin-engine aircraft had trouble communicating in adverse weather. Red Bluff FSS personnel, temporarily sidetracked from the test to bring the real emergency under control and the plane in safely, are (from left): Bob Aumcrots, Mel Jenkins, Dean Shipley, Watch Supervisor, and Ed Johnson, Chief.

## DIRECT LINE

This is your direct line to the top! Your questions will get answers! Employees are encouraged to discuss questions with supervisors or their local personnel office, but for those who do not have ready access to a personnel office, this column will provide an opportunity to get questions answered. Send your letter to Acting PT-1, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D. C., 20590. Ground Rules: • All questions must be signed. • This column should not be used to supplant formal grievance and appeals procedures. • Questions should concern personnel and training policies, programs and procedures, not operational or technical matters. What's your question?

**Question:** The President recently signed a law providing full Civil Service benefits for civilian employees of the National Guard, effective Jan. 1, 1969. The bill stipulates that past National Guard service will be recognized for leave, workmen's compensation, group health and life insurance, severance pay, tenure, and status. I was employed by the Air National Guard as an Air Technician from January 1957 until May 1964. Since then I have been employed by FAA. I have two questions.

As an agency employee, will my past service with the Air National Guard be recognized for leave, tenure and status?

**Answer:** Sorry, but the answer is no. The law affects only the past service of those who are National Guard technicians on or after Jan. 1, 1969. A former National Guard civilian technician who is now a Federal employee is not affected by the law (PL 90-486).

**Question:** Upon termination of my employment with the Air National Guard, I forfeited more than 500 hours of sick leave. Will this be restored?

**Answer:** No, for the same reason given in answer to your first question.

**Question:** Does our current moving bill provide up to 40 hours excused absence for work on a new house within one year of the move?

**Answer:** No, there is no provision in the moving bill to grant time off to an employee to enable him to work on a new house. However, agency policy (PT P 3600.2, par. 78(q)) provides that an employee making a change of official post of duty may be granted time off, not to exceed 40 hours, to make arrangements incident to relocating. The purpose of time off is to make necessary arrangements immediately before and after moving such as: locating a place to live, acquiring water, electricity, and gas services, checking transportation facilities and availability of schools. When relocation of a family residence is involved and the family does not move with the employee at the time of transfer, such time off may be delayed temporarily but not to exceed one year after the employee reports for duty at the new post. This policy applies only to employees changing official posts of duty in the interest of the agency.

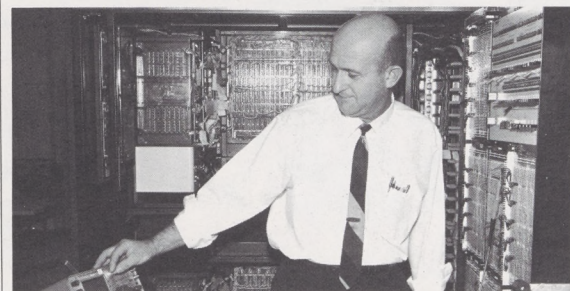
**Question:** When crossing the international dateline going from east to west, a traveler "loses" a day. For example, a flight from Honolulu leaves on the 25th of the month but arrives at Wake Island eight hours later on the 26th. The return flight leaves Wake Island on the 26th and 8 hours later arrives at Honolulu on the 25th. Would you please explain the effects on my pay?

**Answer:** A recent ruling by the Comptroller General provides that you are entitled to pay for the day "lost" when you perform official travel during your regularly sched-

uled work week that involves crossing the international dateline in a westward direction. For travel eastward across the international dateline, the ruling provides that, in accordance with a long standing practice in many Government departments and agencies, your pay would not be increased merely because of the extra day or part of a day which results from travel in an eastward direction. In other words, the crossing in one direction is usually cancelled out by the crossing in the opposite direction. Since you would be paid for a day "lost" when traveling westward, you would not be entitled to pay for a day "gained" in traveling eastward.

**Question:** At the FAA Academy, the agency furnishes prescription safety glasses to all electronics technicians in technical services. My office has brought this to the attention of our Area Office on several occasions in official correspondence; however, we have not received an answer to our letters. If FAA can protect the eyes of its employees in Oklahoma City, why can't it be done here?

**Answer:** Eye protection is available to all personnel who are exposed to eye hazards. Generally, safety goggles or face shields are provided. These devices will fit over corrective eye glasses. Prescription safety glasses are provided for certain personnel at both the Aeronautical Center and NAFEC. The deciding factor is the frequency and duration of the exposure to possible eye injury. Adequate protection is afforded by properly selected cover goggles or face shields. Provision of prescription safety glasses is based upon the need for an employee to spend frequent and extended periods of time in eye-hazardous situations. The amount of time required is such that it is considered unreasonable to expect cover goggles to be worn. To determine if your eye exposure to hazards is sufficient to warrant prescription safety glasses, questions should be directed through your supervisor to the Regional Safety Officer.



**Fixing in the Field**

William Shackelford, a NAS computer technician and one of ten FAA technicians who completed a headquarters sponsored five-day lab and study program on printed circuit board repair, is now putting the new techniques to work at the FAA Depot in Oklahoma City. Here he measures wave forms on a storage element with an oscilloscope.

## Heifer Haul

(Continued from Page 1)

hours from a passenger liner to a freighter. Special pens were installed to keep cattle from wandering and bunching up in flight. The plane can be refitted for passengers in 12 hours.

The 143-foot-long cabin of the \$10.5 million jet will accommodate 270 cattle, averaging 350 pounds each and still stay well within the aircraft's gross load limit of 355,000 pounds.

In addition to the two December flights, eight are scheduled this month and ten next October. Speaking of potential business opportunities, Beeman Fisher, president of the Fort Worth Chamber of Commerce said, "This cattle airlift could open up something really big in world marketing for this area."



**Safety Watchers**

During the first aerial cattle shipment Jack Hudson (left), Chief of the Flight Standards Branch, Fort Worth Area Office, and Inspector George W. House watch operations. Ramp in background at left is ready to receive cattle.

## Lighting

(Continued from Page 1)

It is solid evidence of sound planning plus action. From an aviation point of view, they are far more advanced than many much larger countries I have visited."

The 36-year-old engineer's tour of duty in Israel was his third overseas assignment. Four years ago, he completed a 20-month assignment in Brazil. A native of New York City, Paprocki has bachelors degrees from both the U.S. Military Academy at West Point and MIT. He has been with the FAA for five years.



**Fight Fire**

A USAF fire crew fights a test fire at the National Aviation Facilities Experimental Center while one of its helicopters blasts the flames with its downwash. The joint USAF-FAA test was made to evaluate extinguishing materials airlifted to the scene by the copter.

# Telephone Availability Standby Policies Cited

(EDITOR'S NOTE: This is the third in a series of articles on personnel programs and policies to be printed from time to time in FAA Horizons.)

WASHINGTON—Many employees have raised the question of pay for time outside of their normal work week when they are to be available to return to work. In some instances, the question is phrased in terms of "standby duty"; in other instances, the term "telephone availability" is used.

These two types of duty are distinct and separate. When an employee is on standby duty, he must remain at his duty station, either at his work site or his home (if it is officially designated as his duty station). During the hours that he is scheduled to stand by, he may not leave his duty station and must be immediately ready for work. He may not arrange for someone else to respond to calls or leave a telephone number where he can be reached. The FAA has authority to pay for standby duty.

Telephone availability, on the other hand, is less restrictive and can be scheduled or unscheduled.

Scheduled telephone availability means that the agency must be able to contact the designated employee when he is off duty. When contacted, he must return to duty within a reasonable period of time (normally two hours). However, he does not have to remain at his duty station or his home. He may go elsewhere provided that his control point knows where he can be reached. Alternatively, he may arrange for someone else to respond to his calls—provided, of course, that the person is a qualified FAA employee. In addition, when an alternate telephone number cannot be furnished, the employee can meet this requirement by calling the control point at one-hour intervals during his scheduled telephone availability.

With unscheduled telephone availability, employees will be called at their homes with the first qualified employee contacted being required to return to work. In this instance, however, an employee does not have to remain at his home or near a telephone.

The agency has no authority to pay an employee for telephone availability, either scheduled or unscheduled. However, the employee who returns to perform overtime work will be paid in accordance with the callback overtime pay provisions or reimbursed with compensatory time.

Agency policy on standby and telephone availability is fully de-

scribed in Order 3550.8, which sets forth regulations for all.

In addition to the overall agency instructions, a related directive provides implementing guidelines applicable to Airway Facilities personnel. This Order 6030.31, "Restoration of Operational Facilities," is designed to reduce restrictions on employees' free time to the minimum level and to distribute as equitably as possible the remaining necessary restrictions. The order provides guidelines for using three levels of restoration response to meet three categories of operational requirements.

Operational requirements and restoration levels can be correlated when:

1. The need for the facility is so critical that restoration activities must start immediately.
2. There is a significant need for the facility; however, other facilities and/or procedures can be used while personnel are contacted and are on the way to start restoration. Normally, restoration should be started in two hours or less from the time the technician is contacted.
3. There is little critical need for the facility, and personnel may be asked to return if they can be located, or restoration may be postponed until the following work day.

All levels of the agency are reviewing their operating requirements and designating facilities into each of the above classifications. Where necessary, work situations will be adjusted to assure the availability of the necessary maintenance personnel to cover emergency requirements occurring when technicians are off duty.

The first practice which meets operational requirements in the order of precedence listed below will be used:

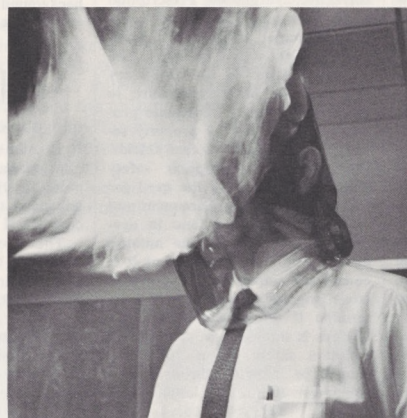
1. No restriction or call-back.
2. Unscheduled telephone availability.
3. Scheduled telephone availability.
4. Scheduled standby duty.
5. Full watch coverage.

Standby duty will be used only where immediate start of restoration action is a continuing requirement. The mandatory long term restrictions of standby duty will not be imposed on employees when any of the alternative methods above will satisfy restoration requirements.

Other work situations within the agency (such as accident investigation, aircraft maintenance, executive piloting) may warrant standby duty or telephone availability in accordance with Order 3550.8.

In FAA tests, use of smoke hoods did not significantly affect emergency evacuation escape time and no significant difficulties were encountered in escaping with new-type hoods.

Airline passengers don protective smoke hoods prior to simulated evacuation. Transparent masks permit all-around visibility and provide breathing protection from smoke for two to three minutes. Eye and face burn protection is also provided.



Capability of smoke hood to protect an individual's face from open flame is demonstrated. Hood can withstand heat up to 1,400 degrees F.

## A New Key to Crash Survival:

# Smoke Hoods

**A**IRLINE accident investigations have shown that, in a number of cases, passengers succumbed to the effects of smoke in the critical moments following the crash, even though they survived the crash itself.

With this in mind, the agency has conducted experiments with smoke hoods over a period of several years, demonstrating another key to survival in "survivable" airliner accidents. A number of lightweight, plastic-type, fire-proof prototype hoods have been developed. Development and evaluation were spearheaded by E. B. McFadden, Survival Equipment Specialist at the Civil Aeromedical Institute in Oklahoma City.

As a result of McFadden's work, the agency recently proposed a rule under which airline passengers and crew members would be provided with smoke hoods to protect them against fire and smoke when evacuating an airplane following a crash landing. Hoods would be carried in a location convenient to each occupant's seat. The ruling would apply to air travel clubs as well as scheduled airlines.

Demonstrated use of protective hoods would be part of passenger briefings which flight attendants are required to give before each takeoff.

Use of smoke hoods would be necessary, under the proposal, during the 90-second emergency evacuation demonstrations which must be conducted by manufacturers seeking FAA type certification of new aircraft and by airline operators before introducing into passenger service new or significantly modified equipment.

Agency experience indicates approved smoke hoods can be manufactured in sufficient quantity and at reasonable cost.

Proposed agency standards for smoke hoods call for coverings to be transparent, with a minimum of 75 per cent all-around horizontal visibility, and capable of holding at least 25.6 liters of breathing air. They would have to permit the wearer to move freely and converse.

Standards also call for a capability of withstanding temperatures of 1,200 degrees for at least five minutes without igniting, melting or yielding hazardous amounts of toxic products. Hoods would be required to withstand exposure of 18-inch-long yellow flames no less than 30 seconds.

Other requirements call for hoods to be non-irritating to the skin, with enough tensile strength to prevent tearing at temperatures up to 750 degrees and capable of enduring extreme temperature and humidity changes, when folded, for 120 hours, without damage.

A firm, comfortable means of closure around the neck would be required to prevent inflow of contaminated air. Hoods would be required to be of flexible materials with sufficient stiffness to stand away from the face and not be drawn against nose or mouth, and not fog up extensively under breathing conditions.

The proposal has been circulated to industry and other interested parties and comments will be received by the agency through April 11, 1969. These will be evaluated before further action is taken on the proposal.



Hoods weigh three ounces and are very compact when folded. For recent FAA evacuation tests, hoods were attached to the underside of passenger seat trays, providing quick availability.