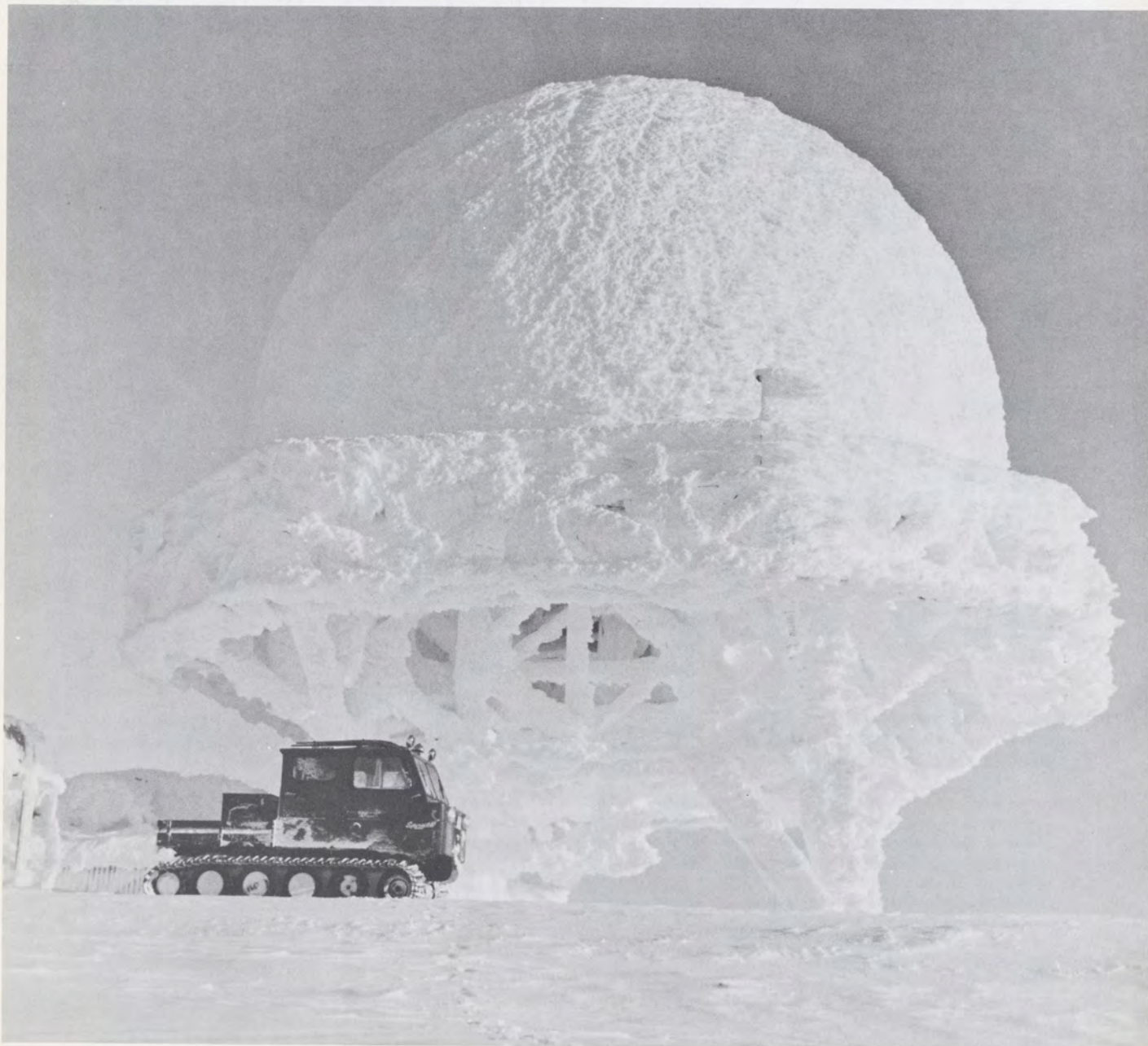


# World

December 1980  
Volume 10 Number 12



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**





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of Transportation  
Federal Aviation  
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## Research Highlights

In 1984, a remote-controlled FAA Boeing 720 will crash in the California desert as one of the last tests of Jet A fuel spiked with antimisting kerosene (AMK).

It will be designed to prove in a close-to-real simulation that the addition of up to 0.4 percent of FM-9, a British-developed polymer, will mini-

mize or eliminate entirely the fireball that occurs when fuel tanks are ruptured. The Special Aviation Fire and Explosion Reduction Advisory Committee (SAFER) has endorsed AMK as the best hope for reducing this hazard.

Scores of large-scale wing spillage tests have already been conducted by the FAA Technical Center at the Lakehurst Naval Air Engineering Center, New Jersey. The top photo shows the results of a rupture with fuel containing AMK; the lower photo, the results with regular jet fuel. In addition, the tests are looking into flammability as a function of the amount of fuel released, the nature of the fuel tank rupture, the temperatures of the fuel and air, the altitude and configuration of the aircraft and ignition sources.

The agency expects the tests will lead to rule-making in 1984.

*The cover:* The first of the prize-winning photos in the Employee Photo Contest to appear in FAA WORLD is this shot of the Cascade ARSR in the Boise, Ida., Sector. Electronics technician Bob Marion won second runner-up honors in the facilities/equipment category and a \$50 U.S. Savings Bond. Marion's foot prints in the eight feet of snow lead from a snowcat being driven by Harold B. Williams, chief of the Cascade AF Sector Field Office.

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### An Endangered Species?

The first-line supervisor may be neither fish nor fowl. Expected to be current as a specialist, the supervisor is limited on overtime pay. Expected to achieve management goals, he may lack the needed support. To slow defections back to the ranks, supervisors and the agency are looking into ways to improve their lot.

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### A 'Big Deal' Sideline

Even in the balloon capital of America, the agency's role in ballooning is small potatoes . . . except once a year during the International Balloon Fiesta. It is a growing sport, however, and FAA is involved in keeping it safe.

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### Is Federal Pay Too High?

Allegations are repeatedly made that Federal pay is too high and that the comparability system is not fair. As counterpoint, we present responses to the charges by the Office of Personnel Management and the Bureau of Labor Statistics.

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### Air Marking, 1980s Style

It's not the buildings we're talking about but the general aviation unpaved airports that need marking so they can be found: FAA's Technical Center is working on a low-cost identification and approach system that's looking good.

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Secretary of Transportation  
Neil E. Goldschmidt

Administrator, FAA  
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## The First-Line Supervisor— An Endangered Species?

Being a first-line supervisor is one of the most difficult jobs in any organization. In fact, doing it well is "like walking the circus high wire," says a recent article in the *Harvard Business Review*.

The main problem, of course, is that first-line supervisors have never been accepted by the higher-ups as part of management, yet they're the ones who must see to it that the goals of upper-management are carried out. And, too often, they're not given the tools or the support to do that effectively.

In the past, employees were willing to accept the challenge of being a supervisor because it meant more money and status. Recently, however, many have begun to regard the job as not worth the aggravation.

Changing attitudes of the workforce towards authority and the rise of unions have helped diminish the authority that supervisors once had. An increasingly vocal, and sometimes hostile, workforce challenges the supervisors at every turn. And often the supervisor is reluctant to take disciplinary action for fear of getting hit with grievances, discrimination complaints or worse.

Besides, in some air traffic field facilities, for instance, first-line supervisors get no more money for their troubles. Often, in fact, they get less than the employees they supervise.

Under the overtime provisions of the Fair Labor Standards Act (FLSA), control-



First-line supervisor John Sullivan observes a manual, or interphone, controller and a radar controller at the Washington ARTCC.

lers draw true time-and-a-half pay for overtime. Supervisors, on the other hand, are exempt from FLSA and cannot exceed the \$50,112.50 Federal pay cap. So, there are cases in GS-14 facilities where a few controllers may make as much as \$55,000 or even \$60,000 per year, while their supervisors, who may work as much overtime or more, are making \$5,000 to \$10,000 less.

That, in a nutshell, is the major reason why more and more supervisors are packing it in and returning to the workforce as controllers. In 1976, for example, 41 supervisors in air traffic facilities returned to the "boards." That number jumped to 55 in 1977, 60 in 1978 and 82 in 1979.

It's more than pay, though, that's driving supervisors back to the boards and making it increasingly difficult for upper management to recruit first-line supervisors. (See page 6, "The Sups-Eye View of the Problem.")

There's a lot of anger and frustration among first-line supervisors, fueled by the conviction that they've become second-class citizens who aren't appreciated for what they have to put up with to keep the air traffic system working.

Those feelings came to a head in 1979 when a small group of FAA supervisors attended the national meeting of the Federal Managers Association in Washington, "looking for an organization to tie our wagon to," explained Hank Aaron, team supervisor at the Atlanta tower.



David Westenerger, a first-line supervisor in the Dulles cab and TRACON, conducts an "over-the-shoulder" evaluation of a radar controller.



Supervisor Robert Wright of the Washington FSS, Leesburg, Va., helps specialist Judy Terry outline weather patterns on a map displayed at specialists' positions via closed-circuit TV.

"We needed someone to start paying attention to our complaints."

In October of 1979, this small group held a meeting in Atlanta for FAA supervisors, under the auspices of the Federal Managers Association. Humorously, they billed the meeting as "The Gathering of Eagles" (another endangered species) to drum up a little enthusiasm for the meeting, recalled Aaron. It worked. About 250 FAA people from all over the U.S. showed up.

Ray Van Vuren, who was then Deputy Director of the Air Traffic Service and later was to become its Director, along with Bob Orr, the Executive Officer of the Air Traffic Service, and several others from Washington also were invited.

The Washington headquarters people had to sit through "what we have since come to humorously call forums," said Aaron, "but which more aptly should have been called question-and-accusation

sessions. I admire Ray and Bob and the others for the way they handled themselves at those sessions. They came away with their skins and the respect of everybody there. They also came away with some information."

That meeting led to the formation of a Supervisors Task Force, which has developed a set of recommendations for improving the supervisors' working conditions.

Some of those recommendations have already been met. The Technical Appraisal Program (TAP), for instance, which supervisors had found terribly time-consuming, has been simplified. Now, supervisors conduct "over-the-shoulder" appraisals of controllers only twice a year, and the annual review has been cancelled altogether.

A program is being developed that will permit supervisors to evaluate the air traffic control system from the cockpit of airliners, as well as from their work areas,

Controllers wait to talk with first-line supervisor John Sullivan at the Washington ARTCC while he deals with one of many administrative matters.



and currency and proficiency requirements for supervisors have been standardized. In addition, a supervisors' newsletter has been initiated to provide a channel of communication between Washington headquarters and the field. For that same reason, supervisory committees also have been set up at the facility, regional and national levels. The first national meeting will be held in February to discuss whatever the supervisors want to talk about.

Most supervisors agree that these are steps in the right direction, but they don't address themselves to the supervisors' main concern—the aggregate salary limitation. And, of course, there's nothing FAA can do with a stroke of a pen to change that. But, a legislative proposal for Congress has been prepared that would provide true time-and-a-half pay for GS-15 supervisors and allow both facility supervisors and controllers to draw all premium pay, including night and Sunday differential, holiday and overtime.

But, the success of that will depend on a number of factors, including the new Administration and the Congress which come to Washington in January.

In the meantime, says Hank Aaron, "at least the wheels have been set in motion for some long-range relief, and there is tangible evidence that people are concerned and are willing and eager to listen to us and try to do something about our complaints."

"We'll find a solution," he added, "and we hope that solution will be a joint effort between supervisors and upper management. There's a hell of a lot of anger and frustration out there. But there's also a basic desire to be in management and to be an integral and useful part of management." ■

## The Sups-Eye View of the Problem

The following are excerpts from presentations by Air Traffic supervisors on the role of the supervisor at a special session of the Air Traffic Control Association's 25th annual fall conference, October 19-24 in Arlington, Va.

### John L. Sullivan, team supervisor, Washington ARTCC

The idea that the supervisor is the man in the middle, the man on the tightrope, is one that we accept. But, the supervisor needs support. He needs to know he's important. He needs to know he's going to be paid not less than his subordinates for the same hours. He needs to know that something will be done to take care of his legitimate complaints and concerns. The supervisor is torn between the two poles of being an operational type versus the paper-and-administrative type. And it's a hellish thing to try and serve both masters.

He has to ensure that his people are current and that they're caught up on all the changes in the manual, handbooks and anything else that comes down from upper-management. The supervisor also needs to get his people motivated to do simple things, like coming to work and getting them to treat each other like hu-

man beings once they get there. In addition, he's involved in the making of controllers. There's probably no area where supervisors have a chance to blow it more often than in this area. The name of the game is documentation. There's counseling and consoling if somebody's not making it. If you have a difficult controller or somebody who's not so difficult but is having a hard time, you've got a morale problem on your team.

The supervisor also has to retain his currency, we're told, so he can provide a role model the controller can look up to. We're also told that this currency is needed to prevent a system collapse. A lot of the supervisors who are still around worked shoulder to shoulder in 1970 to keep the system running. I'm sure this will happen again if it's needed. Some of these supervisors, however, are 10 years older. They're a bit slower. Users will face delays and won't get the good service they get today, but there will be a safe, if not expeditious flow of traffic.

### Dave Canoles, until recently team supervisor, Norfolk, Va., tower; now is on the Executive Staff of the Air Traffic Service in Washington headquarters.

The air traffic supervisor of today, as well as any manager in any corporation, is dealing with probably the brightest and the best-educated workforce we've ever seen. The controllers are very demanding and rightfully so. We expect perfection from them. They, in turn, expect it from us. They're inquisitive. You can no longer sell a procedure by saying here it is, and you're going to do it this way because I said so. They're also impatient. They're working airplanes doing 600 miles per hour, and they don't understand why it takes us five minutes to come up with an answer to a procedural question.

People-oriented is a term that psychologists came up with years ago. Nowhere is it more necessary than within our profession. All it means is that the boss cares about the folks that work for him. But, it's becoming more and more difficult. Respect for the supervisor is very much on the decline. What once could be handled in a word-to-the-wise-type situation or constructive criticism now takes on formal tones, so quite often a simple suggestion can turn into a very ugly situation.

The accountability of the supervisor remains enormous. He has to make on-the-spot decisions and hope for the best. Quite often those decisions are later evaluated and the supervisor is subject to a lot of criticism for something he had to do in a very hurried manner. Because of this, he loses his credibility, especially with the workforce.

He also has to wade through innumerable suggestions and complaints. He has to determine the validity in each case, whether it's truly a suggestion or complaint that will help the system, or if it's simply a case where somebody's trying to stick it to the supervisor. He has to be equally responsive to management. He's charged with selling things to the workforce that aren't always exactly palatable.

## "The biggest single problem in all this is that the controller who would normally aspire to management no longer has any ambition to do so."

The biggest single problem in all this is that the controller who would normally aspire to management no longer has any ambition to do so. He looks at my job, sees the flack I'm catching from both sides, looks at his own situation and figures he's in a pretty good spot.

### Fred Gibbs, deputy chief, Philadelphia FSS

Upper-level management must give the team supervisors the authority and the

backing to run the ship. Many team supervisors feel the FAA has given away too many things and has effectively handcuffed the team supervisors. The workforce is now so protected that taking action against them creates a paperwork monster, which detracts the supervisor from running the ship.

The team supervisor has the responsibility for training people. But, if they don't qualify, why is it so hard to get rid of them? The employee who isn't working out is very protected from being reassigned or released. A quick way for a person to hang on is to file a complaint, and that can drag out things for months or even years. In the meantime, supervisors get stuck with them. They're put in staff positions, and they float around the facility doing menial administrative jobs, agitating the workforce and complaining about the bum rap they got.

I've talked with many team supervisors who've said they have considered going back into the working ranks. Sometimes, they'd like to be the ones doing the aggravating.

The team supervisor's job is very critical. I see my supervisors come to work sick, because they know they couldn't be spared. They come to work regardless of the conditions, only to find out that three or four people have called in sick, when they're really not.

Does upper-level management help the team supervisors? Or do most of team supervisors believe that the light they see at the end of the tunnel is really the train coming through the other end to mow them over? ■



Balloonists await a launch signal from officials just after dawn. There were five waves of launches of about 60 balloons each at 15-minute intervals.



Albuquerque tower planning and procedures specialist Bob Turner warns pilots against emergency landings inside the electrified fence of a classified research facility, suggesting they take their chances with the golf pro on a nearby golf course.



Photos by Hollis Walker

By Hollis Walker  
A public information specialist in the Southwest Region, she has been a radio news director and in public relations at North Texas State University.



## A 'Big Deal' Sideline

### Ballooning May Draw Increased Attention

Once a year, during the International Balloon Fiesta, Albuquerque FAAers have a corner on the market for fun agency jobs. Work and entertainment fuse for FAA employees who participate in the spectacular eight-day event.

Albuquerque, known as the "Hot Air Balloon Capital of the World," has hosted the annual sporting event since 1971, when only 10 balloonists got together for a joint launch. This year's fiesta brought together more than 425 balloonists from all over the world and drew crowds at the Simms Field launch site of more than 75,000 people on a single day.

The FAA's role in ballooning is a small one, even in Albuquerque, which boasts 100 balloons, more than any other city in the world. "This is just a sideline for us," G. C. Johnson, Albuquerque General Aviation District Office operations inspector, said, "except for the fiesta. Once a year, it's a very big deal."

Johnson, a balloon-rated examiner who administers flight checks to pilots, and Jim Valentine, also an operations inspector, are the GADO's resident balloon experts. The agency sent Johnson to ballooning school in response to the increase in the sport in the last 10 years. In 1973, there were only 250 balloons in the world; today there are more than 2,000, two-thirds of which are in the United States.

The FAA licenses balloon pilots and certifies balloons as airworthy. To obtain a private license, one must complete 10 hours of flight time, including a one-hour solo, under the supervision

of a pilot with a commercial balloon rating. A written exam and a check flight with an FAA-designated examiner must be passed. Commercial balloonists, certified to carry passengers for hire, are required to have logged 35 hours of flight and take an additional exam and check ride.

Ninety percent of flight checks are given by designated examiners in the field. Before examiners were designated, Johnson and Valentine administered as many as 50 tests a year; now they give 5-6 a year, Johnson said.

A flight check for a balloonist is similar to that for pilots of fixed-wing aircraft, but a balloonist also must demonstrate the ability to manage, direct and signal his 5-6 crew members, he said. The examiner observes the balloon pilot and crew while they spread the envelope on the ground, inflate it and make checks before take-off. During flight, the examiner questions the pilot about maximum and minimum temperatures and wind conditions for safe flight.

The pilot must prove in flight that he can maintain altitude, ascend and descend slowly and rapidly, perform emergency-avoidance techniques, select a proper landing site and land near the target, Johnson explained. Emergency procedures include "ripping the top out of it," which means pulling the ripcord to open the vent fully for fast descent, and terminal velocity descents, when burners or fuel are not operable. The pilot must be able to relight burners, manage fuel controls and show how to put the balloon down safely if unable to reestablish fuel supply.

Airworthiness inspections on balloons are required every year or 100 flight hours and are conducted at certified repair stations. There are six in New Mexico, according to Jim Mascone, GADO maintenance inspector. "Airworthiness tests on the envelope include checking for rips or tears or deterioration from heat or solar rays," he said. The harnesses and gondola are checked for stability; valves, coils and seals on burners and fuel lines are tested. Both visual and operational checks are conducted.

FAA also certifies repair workers, who must have 18 months experience to qualify.

FAA participation in ballooning culminates in the annual fiesta, when hordes of the sport's enthusiasts take over Albuquerque.

Initially, balloonists were attracted to the city for its almost ideal weather, wind conditions and terrain. But the fiesta is as much a social as a sporting



Jim Mascone (foreground), GADO maintenance inspector, and Roger Mitchem, operations inspector, register pilots and their balloons and check documentation the night before the first flights.

event. "It's the same as people in any sport flocking together, only ballooning is more spectacular than stamp collecting," Johnson observed. "There wouldn't be as much interest if it weren't for things like the fiesta."

The fiesta spans two weekends. Mass launches are held each weekend morning, and races and contests are scheduled during the week.

"In fact, this whole town's ballooning-oriented," Johnson said. At least 1,000 people participate in organizing and conducting the fiesta each year, and all are volunteers. Planning goes on year-round, and FAA is consulted from the beginning.

The GADO, ATCT and FSS all are involved in coordinating the festival to maintain air safety for balloonists and other aircraft. Air traffic personnel are responsible for determining airspace restrictions. This year, the airspace from the surface to 8,000 feet was restricted throughout the flying hours of the fiesta. City officials, fiesta directors and the FAA sign a letter of agreement on the regulations.

Tower personnel also provide pilot briefings the night before the fiesta begins about restricted airspace around the airports and Sandia Laboratories on Monzano Mountain and give instructions on procedures to follow if it is necessary to land in a secure area, such as the mountain, Kirtland AFB or an airport runway.

The Flight Service Station publishes a notice for pilots prior to the fiesta, sends letters to all New Mexico FSSs



The crew of a hot-air balloon inflates the envelope as it lies on the ground.

and includes a warning about the event in all pilot briefings and TWEB broadcasts—although it's hard to believe anyone could be unaware of the fiesta.

The GADO plays by far the largest FAA role in the event. Pilots and balloons must be registered and have their certificates checked for currency. Registration, a day-long task, is the most complex job, Mascone said. "We spend the whole day talking to the Records Center in Oklahoma City on the phone, checking out missing documents. The last thing anyone wants to do is to have to tell some balloonist who's traveled all the way to Albuquerque that he can't fly," he said. The center is able to certify most questionable entries, but the rules are never bent, regardless, Mascone added. During the launches, two GADO inspectors are on the side, ready to troubleshoot in case of emergencies and available to give technical advice.

At this year's fiesta, a balloonist experienced what investigators suspect may have been a burner flame-out, and the balloon drifted into a power line. The pilot and two passengers, unwilling to chance electrocution, jumped out of the gondola about 15 feet above the ground, accident-prevention specialist (APS) Gary Lavender said. It turned out to be the wisest choice. Electrical current arced through the envelope, starting a fire which destroyed the balloon. The pilot was badly bruised and cut, but the passengers were unharmed.

At large gatherings of balloons, mid-

air collisions also are a possibility. One occurred this year at the fiesta when a balloon descended atop another, ripping a four-foot hole in its envelope and causing a hard landing. The occupants were not injured. Both cases were classified as "incidents," since injuries were slight, and investigated by the FAA, Lavender said. Investigation of the power line incident is not complete; the mid-air case was marked up to crowded conditions and the slow control reaction time of balloons. GADO personnel felt lucky this year that no serious accidents occurred, and Lavender thinks it may be due to more caution on the part of pilots after witnessing an accident at the 1979 fiesta.

"Balloonists are always trying to fly over the crest of the Sandias on the east side of town," he said. "There are really high currents and unpredictable winds on the west side of the mountains." Last year, a pilot and a young woman he gave a ride were killed when they attempted the crossing. A camera crew filming the fiesta recorded the entire accident. Violent wind currents buffeted the balloon, distorting the envelope beyond its endurance until it ripped apart into a flat streamer, and the balloon crashed into the mountain-side, Lavender said. This year only one pilot crossed the mountain.

Accident investigation for ballooning requires a lot of personal judgments on

the part of the investigator, Lavender said. The criteria used to classify cases as accidents or incidents in ballooning are the same as those used for fixed-wing accidents, but the specifications used for planes don't always apply to balloons, he said. "For example, trying to decide what constitutes structural damage to a balloon is difficult. If a corner of a gondola is knocked off, is that sufficient damage to classify an event as an accident? And a rip or tear in a balloon envelope certainly sounds like structural damage, but a balloon can fly with numerous and/or small holes in it, especially if they are below the equator. So how do you decide? We use a lot of gut feeling," he explained.

Accident prevention for ballooning is a relatively new venture. Although an abundance of materials exist for preventative counseling on other aircraft, the FAA has no pamphlets, slide shows or films on ballooning, Lavender said. Pilot error is the most frequent cause of accidents in ballooning, as in other types of flying, which emphasizes the need for better accident prevention efforts, he said.

Lavender has been approached by the Balloon Federation of America to take part in a joint effort with FAA to provide safety literature and presentations on ballooning, and has applied for agency funding for the project. The APS believes that ballooning, like air

taxi operations, has increased to the extent where FAA soon will have to direct more attention to it.

"Some revisions in procedures may be necessary in order to enhance safety," he said. "Rather than more rules restricting ballooning, what we need most of all are some changes in pilot certification. For example, you don't even have to have an instructor's rating to teach ballooning, just a commercial license," he pointed out.

Albuquerque has become sort of an unofficial "lead region" for balloons. FAA engineers who oversee the manufacture and design of U.S.-made balloons (Barnes, Adams, Raven and Piccard are the four major U.S. makers) often call Albuquerque for information, he said. Lavender, Johnson and Valentine now are involved in an investigation of one type of balloon fabric that seems prone to ripping and is short-lived. And Lavender also is helping the Atlanta office of the Na-

tional Transportation Board conduct an accident investigation.

The success of their work is nowhere as evident as at the fiesta, where all of the directors and many of the balloonists know the FAAers on a first-name basis and never miss an opportunity to give the FAA credit for making the fiesta a success.

More than anything else, though, participation in the fiesta is a sort of bonus to the Albuquerque FAAers who are involved. But it is hard work, Johnson said. FAAers on duty at the fiesta have to get up long before dawn to reach the site prior to the pilots' briefing.

Munching on Indian fry bread as he watched the desert dawn behind the colorful balloons dotting the field, Johnson claimed he could live without the fiesta. "Oh, it's pretty, but it wouldn't bother me a bit not to have it," he said. One suspects he is full of hot air. ■

### 'A Perfect Box' and Other Balloon Esoterica

There are two types of balloons in use today—helium- or hydrogen-filled and hot-air balloons. Hot-air balloons are far more common and less expensive to operate than gas ones.

The most popular sport balloons are designated AX-6s and AX-7s. An AX-7, for example, inflates to a 77,000-cubic-foot volume and stands 60 feet tall. Its entire system weighs 300-700 pounds. It can carry two to three passengers plus 20 to 40 gallons of fuel and stay aloft for two to three hours.

The balloon's air is heated by propane burners, which causes the balloon to rise. Maneuverability is limited to ascending or descending, either by

turning on the burners to heat the air to ascend or allowing the air to cool so the balloon will drift downward. Direction can be controlled only by changing altitude. Balloonists yearn for the "perfect box"—a situation where at low altitudes the wind blows in one direction, but at a higher altitude the wind shifts, taking the balloon the other way.

Balloons usually fly early in the morning or late in the afternoon, when the chances are least for bad weather or poor thermal conditions to develop. Winds of eight knots are ideal, and balloons rarely fly when speeds exceed 12 knots. Most sport balloons are flown at 2,000 feet or less AGL. ■

# Is Federal Pay Too High?

There has been a proliferation of articles, editorials and talk-show interviews criticizing the amount of Federal pay and the method of computing its comparability with private sector salaries. Despite the appropriateness of the discussions, many of the allegations by outsiders and former Federal employees are accompanied by faulty statistics and bad arithmetic. Instead of quoting errors in reasoning at length, *FAA WORLD* presents distillations of the primary allegations along with abridged responses from the Office of Personnel Management and the Bureau of Labor Statistics, plus additional commentaries.

Federal employees are overpaid—their salaries are outstripping those paid in private industry. Federal pay should be cut instead of raised.

All too often, the increases in Federal pay are seen in raw numbers, which don't tell the story. A casual glance shows that Federal salary increases over the past 18 years have outstripped those in private enterprise; you will see that from 1961 through 1978, private enterprise average salaries rose 144 percent while Federal salaries jumped 155 percent.

The fallacy in accepting those figures, however, is in not recognizing what was happening at the beginning of Federal pay comparability.

In 1961, the pay differential in favor of private industry ranged from 14 percent at the GS-7 level to 32 percent at

the GS-15 level. What the pay comparability law did initially was to play catch-up, which resulted in Federal salaries rising nearly 55 percent between 1961 and 1969 at the same time that private pay rose 36 percent. After the catch-up period, however, the trend was reversed.

From 1969 to 1978, Federal salary increases slowed and dropped below those in the private sector largely as the result of changes in the statistical method used to compute comparability and of alternative Presidential pay plans that were below those recommended by the Pay Agent.

The pay comparability law (PL 87-793) of 1962 provided that:

- there be equal pay for substantially equal work;
- pay distinctions be maintained in keeping with work and performance distinctions;
- Federal pay rates be comparable with private enterprise pay rates for the same levels of work; and
- pay levels for the statutory pay systems be interrelated.

The five increases that followed turned out to be too little, too late. In 1967, PL 90-206 was passed, which provided for a three-stage increase designed to achieve comparability by 1969. It must be remembered that these were not comparability increases but deliberate catch-up adjustments. The growth of private-sector pay at this time was irrelevant for comparison purposes.

When a comparison is made of actual comparability increases for the period 1969-1979, we find that the Consumer Price Index increased by 105 percent, white-collar pay in the private sector as measured by the comparability survey increased 103 percent and the rates of the General Schedule increased by 84 percent. Again, the retreat from comparability was due to the alternative pay plans and refinements in the survey.

Okay, but all of this is based on the survey. The selection of jobs for the Bureau of Labor Statistics survey and the matching of government and industry jobs are not handled fairly. Too many high-pay jobs in industry are used, and the survey is based on companies that have 250 or more employees, which tend to pay better than smaller companies. It seems to me that there's a built-in bias in pay comparability when Federal employees design the surveys for use by other Federal employees in devising the paylines to benefit all Federal employees.



Photo courtesy of CAP Telephone Co.



## Industry vs. Government

Federal employees of the Bureau of Labor Statistics of the Department of Labor carry out the survey, and certainly there are other Federal employees working on the design of the survey.

The basic decision authority, however, is vested in the President's Pay Agent. This body consists of the Director of the Office of Personnel Management, the Director of the Office of Management and Budget and the Secretary of Labor, hardly a group to benefit from pay comparability increases.

The Pay Agent is required to consult with and give thorough consideration to the views of a five-member Federal Employees Pay Council, which was made up of union officials until their mass resignation in 1978 to protest the "pay cap" on Federal salaries.

There is also an Advisory Committee on Federal Pay made up of three private-sector pay experts, which makes its recommendations directly to the President.

Finally, since it's the Pay Agent that decides on survey coverage and design, and outside study groups have made their influence felt over the years, it would be an exaggeration to suggest that the employees themselves could have an undue influence on the pay increases.

As to the survey itself, formally known as the National Survey of Professional, Administrative, Technical and Clerical Pay (the PATC Survey), it covered nearly 36,000 private enterprise establishments with 8.8 million white-collar employees in 1977. Last year, the coverage was a third larger.

The minimum size company varies. In manufacturing, for example, 100 employees is the floor in chemicals, oil refining, machinery and transportation equipment and instruments; 250 in all others. There's a similar division in non-manufacturing industries.

The survey's minimum sizes were selected, for the most part, on the potential return of data on salaries for white-collar employees in narrowly defined work levels. If you have a manufacturing plant with 100 workers,

for example, too few would be white-collar workers, and most of those would be general office help, rather than the specific occupations being surveyed. On the other hand, a bank with 100 employees would provide more meaningful data.

A question raised is whether private enterprise in the survey should include all private establishments in the U.S., regardless of industry, size or operating for a profit or whether the Federal Government—as the nation's largest employer—should be compared with only the largest private enterprise establishments.

The result is that establishment sizes in the survey range between the two extremes.

A probability sample of about 3,600 companies was selected from the survey universe of 36,000, which included 19 occupations in grades GS-1 through

15, ranging from messengers and file clerks to high-level attorneys, chemists and engineers, comprising 81 defined work levels.

The PATC survey occupations must be surveyable in private enterprise, representative of occupational groups numerically important in both the government and private enterprise and essentially of the same nature in both sectors.

Although the survey provides statistically reliable average salaries for the white-collar occupations in the private sector, the averages do not automatically correspond with the alignment of salaries and work levels there. This is because the sample establishments account for different proportions of workers in the occupations and work levels surveyed, plus some industries pay better for the same job.

In making the comparability determination, the Federal salary for a particular grade is compared only with the private enterprise salaries of individuals who are doing work that the government defines as at that grade level, regardless of the occupation. The end result is a grade-for-grade comparison between the Federal and private sectors, satisfying the goal of equal pay for equal work.

It must be remembered that averages are being used and that they apply to work levels, which are equated to GS grades. An exact job-to-job comparison cannot be made.

The Department of Commerce's 1979 "Survey of Current Business" shows that in 1978, Federal employees earned

an average salary much higher than an all-industry composite average salary. The Office of Personnel Management claims this is raw data that doesn't reflect the higher numbers of professional and administrative personnel in the government. But the increase in Federal programs since 1962—when comparability began—has been in social programs, where clerical personnel predominate, not in technical programs. In that same period, Federal pay rose from being 27 percent higher than industry's pay to being 44 percent higher.

A comparison of the overall average salaries in the Federal and survey population—which is not all-industry—will not indicate either underpayment or overpayment.

These figures also do not reflect the mix of employees, which makes it an apples-and-oranges comparison. Just this fall, Alan Campbell, Director of the Office of Personnel Management, stated, "You have to account that the public sector has more professionals than is true proportionately in the private sector."

Actually, the emphasis in the survey is in the other direction. The Federal figures include thousands of GS employees working in physics, mathematics, psychology, biology, physiology and other sciences. Because they are highly trained, they are generally found in the higher GS grades, but their private-sector counterparts are not

included in the survey population average. If they were, the balance would tip far to the side of industry salaries.

For example: The Federal survey included Federal physicians, but the more than 230,000 office-based physicians in the private sector were not included in the survey. Taking their median income of \$68,000—supplied by the American Medical Association—which is probably 20 percent below their average income, this one occupation added to the survey would raise the private-industry salary average by about 50 percent!

Because of this, because of the use of poor statistical techniques and because of improper data bases—such as 1962—the calculations of imbalance in favor of Federal employees can be faulted.

**Between pay increases and annuity cost-of-living increases, Federal employees are being unjustly enriched. Why should employees and retirees of the Federal Government be insulated from inflation? Many workers in private industry don't have such protection.**

The pay-comparability increases in government have lagged behind the pay increases that private-sector employees have negotiated, as evidenced by the difference between the increases granted and the recommendations of the President's Pay Agent (see table).

The cost-of-living increases are an attempt to protect the purchasing power of annuitants, as is done for Social Security benefit recipients. It's no more relevant to argue that many annuitants are receiving more than they earned as

### Comparability Over the Decade

Date of change	Average increase	Comparability recommendation
January 1971	6.0	6.0
January 1972	5.5	6.5
October 1972	5.1	5.1
October 1973	4.8	4.8
October 1974	5.5	5.5
October 1975	5.0	8.7
October 1976	4.83	4.83
October 1977	7.05	7.05
October 1978	5.5	8.4
October 1979	7.0	10.4
October 1980	9.1	13.46

active workers, thanks to these increases, than to point to the fact that janitorial help is earning more today than a GS-11 professional was earning a dozen years ago. Often, the complaints of high Federal annuitants are documented with the pension figures for senior-level retirees, but the average Federal annuity last year was \$795, which is equivalent to the salary of a GS-2.

**Pay comparability increases don't take into account the step increases that most Federal employees receive, nor the bonuses the executives get, nor the benefits they receive. A "total compensation" comparability system would expose the true costs of these benefits and bring about a reduction in the amount of Federal pay increases.**

Average Federal salaries are calculated by the President's Pay Agent for each GS grade, based on the present salaries of employees within each grade. The averages reflect the distribution of employees over the 10 within-grade steps. By using these weighted averages, within-grade increases received since the previous year's comparison with private industry are accounted for in the process.

Executive bonuses were begun only this year and have had no relationship to pay comparability. Senior Executive Service positions are not GS—they are non-graded—and do not come within the Pay Comparability Act or the Civil Service Retirement System.

Whether a total-compensation system that covers the spectrum of Federal and private-industry benefits would show the Federal employee's compensation package to be superior or not is moot at this time. The range of benefits

available to white-collar workers in the private sector is extremely diverse, which would have to be surveyed and evaluated for a fair comparison.

Among them are benefits not to be found in the Federal sector, such as Christmas bonuses, profit sharing, stock options, severance pay even upon retirement (called "redundancy" in one firm), free company-owned resorts and discounts for company products or services, like airline travel. Among others are liberal travel allowances and fully paid health and life insurance.

It should also be pointed out that Federal retirees pay taxes on their annuities at every level of government, while Social Security benefits are tax-free. Last year, Federal retirees returned about \$2 billion to government coffers out of annuities totaling \$12.6 billion, but no taxes were returned for Social Security benefits totaling \$87.6 billion.

Further, neither the annuity payments nor the cost-of-living adjustments are a burden on the taxpayer, since these are paid from the retirement fund, which last year had assets of more than \$64 billion. The Board of Actuaries has projected that under the present funding method, receipts will exceed disbursements for at least the next 100 years.

It is true that most private-sector pensions do not provide for cost-of-living increases despite the runaway inflation. These pensions, however, are in addition to or coordinated with Social Security, which does increase. Other benefits, such as the "redundancy" mentioned above, improve private-sector retirement.

It's said that Federal pay is often inadequate to attract quality people to government service, particularly at top levels, and stories are published about executives returning to private industry because of the inadequate pay. High pay is hardly the best motivation for public service, and I think we could do without such people. Meanwhile, there seems to be a mighty scramble for each Federal job vacated!

In passing pay comparability legislation, Congress sought to maintain equity for Federal and private employers competing for labor resources and to permit the Federal Government to attract, retain and motivate qualified employees. However, workers will pursue their own pots of gold. If the money appears to be in the private sector, it may suggest either that pay comparability increases have not been enough or that the individual may be over-qualified for the Federal job he or she holds. It will also depend on the particular labor market. In Alaska, for example, the Federal Government seems to have become a less-competitive employer, as employees in all occupational categories have left for significantly more lucrative jobs in the private sector.

It's not necessary to impugn the motivation of executives coming to work for the government. They know the pay limitations set by Congress and they know what's available in the private sector. Their hiatus in government may be a selfless contribution to public service.

And the scramble for vacated government jobs may be merely a commentary on the recession and unemployment. ■

## Alaskan Region

- Gerald F. Dunn, chief of the Cold Bay Flight Service Station, from the Bethel FSS.
- William B. Farquhar, chief of the Systems Staff in the Accounting Division.
- James M. Pearson, deputy chief of the Anchorage ARTCC, from the Oakland, Calif., ARTCC.

## Eastern Region

- Darwin F. Arnold, team supervisor at the Rochester, N.Y., Tower.
- Glenn A. Bales, chief of the Rochester Tower, from the St. Louis Tower at Lambert Field.
- Frederick J. Bolster, team supervisor at the Washington National Tower.
- Richard D. Burns, chief of the Utica, N.Y., Flight Service Station, from the Philadelphia FSS.
- Kurt P. Frenzel, team supervisor at the Syracuse, N.Y., Tower.
- Kenneth M. Lauterstein, chief of the Valley Stream, N.Y., Aeronautical Quality Assurance Field Office, from the Engineering and Manufacturing Branch, Flight Standards Division.
- Louis S. Natale, deputy chief of the Westchester County, N.Y., Tower.
- Richard J. Smith, chief of the Westchester Tower, from the New York Common IFR Room.
- Charles E. Stafford, chief of the New York CIFRR, from the Reno, Nev., Tower.
- Richard C. Sutter, team supervisor at the JFK Tower, New York, from the New York CIFRR.

## Great Lakes Region

- Danny D. Dankof, team supervisor at the Minneapolis, Minn., Flight Service Station.
- Matthew Dunne, team supervisor at the Chicago O'Hare Tower.
- Thomas R. Jansen, team supervisor at the Chicago O'Hare Tower.
- Roger E. Kleinsasser, chief of the Redwood Falls, Minn., FSS, from the Milwaukee, Wis., FSS.
- Daniel J. Kuhn, team supervisor at the Chicago O'Hare Tower.
- Clayton A. Lowe, assistant manager of the Chicago O'Hare Airway Facilities Sector.
- Jeffrey L. McCoy, team supervisor at the Chicago O'Hare Tower.
- Lloyd G. Mosier, team supervisor at the Alton, Ill., Tower, from the Saginaw, Mich., Tower.
- Robert Pywowarczuk, team supervisor at the Chicago O'Hare Tower.
- Janet H. Starr, team supervisor at the Ann Arbor, Mich., Tower.
- Kenneth E. Washington, assistant chief at the Cleveland Hopkins Tower in Ohio, from the Akron-Canton, Ohio, Tower.
- Kenneth J. Willis, Jr., deputy chief of the Minneapolis FSS.
- Donald B. Wyatt, chief of the Chicago Midway Tower, from the Ann Arbor Tower.

## New England Region

- George H. Zarella, team supervisor at the Boston Tower, from the Portland, Ore., Tower.

## Northwest Region

- Wing C. Chin, chief of the Seattle Engineering and Manufacturing District Office.

- Robert E. Follensbee, chief of the Propulsion Branch of the Los Angeles Area Aircraft Certification Office.

- James W. Hart, Jr., chief of the Airframe Branch, Seattle Area Aircraft Certification Office.

- Roy L. Mayfield, chief of the Air Transportation Branch, from the General Aviation/Air Carrier Branch.

- Frank D. Melton, chief of the Flight Test Branch, Seattle Area Aircraft Certification Office, from the Engineering and Manufacturing Branch, Flight Standards Division.

- Richard E. Prang, chief of the Spokane, Wash., Tower, from the McChord AFB, Wash., RAPCON.

- Chelsie C. Risner, chief of the Manufacturing Inspection Branch of the Los Angeles Area Aircraft Certification Office.

- Ernest E. Southerland, chief of the Flight Test Branch of the Los Angeles Area Aircraft Certification Office.

- Burleigh J. Stokes, deputy chief of the Spokane Tower.

- Richard H. Ulm, chief of the Modification Branch of the Seattle Area Aircraft Certification Office, from the Engineering and Manufacturing Branch, Flight Standards Division.

- Hugh E. Waterman, chief of the Systems and Equipment Branch of the Los Angeles Aircraft Certification Office.

## Pacific-Asia Region

- John H. Covey, Jr., team supervisor at the Honolulu ARTCC.
- Hiroshi Fujimori, maintenance mechanic foreman in the American Samoa Airway Facilities Sector on Tutuila Island, from the Maintenance Operations Branch, Airway Facilities Division.

- John J. Maloney, team supervisor at the Honolulu Flight Service Station, from the Plans, Programs and Evaluation Branch, Air Traffic Division.

- Richard A. Morris, deputy chief of the Honolulu Tower.

- Sherryl D. Warren, team supervisor at the Kona Tower in Kailua, Hawaii, from the Pago Pago, Samoa, Combined International Station/Tower.

## Rocky Mountain Region

- Robert B. Johnson, assistant manager of the Casper, Wyo., Airway Facilities Sector, from the Bismarck, N.D., AF Sector.

- Charles R. Taylor, chief of the Helena, Mont., Flight Standards District Office, from the General Aviation/Air Carrier Branch, Flight Standards Division.

- Robert A. Westhoff, deputy chief of the Denver Air Carrier District Office.

## Southern Region

- Leland I. Adams, team supervisor at the Tallahassee, Fla., Flight Service Station.

- Charles C. Blankenship, team supervisor at the Mobile, Ala., FSS.

- Santiago Garcia, team supervisor at the Jacksonville, Fla., ARTCC, from the Miami ARTCC.

- Thomas E. Graham, chief of the Ponce, Puerto Rico, Tower, from the Isla Verde Tower in San Juan, P.R.

- Leon H. Harrison, chief of the Airspace & Procedures Branch, Air Traffic Division, from the Military Activities Branch.

- Ralph D. Hubbard, chief of the Myrtle Beach, S.C., Tower, from the Bowman Field Tower in Louisville, Ky.

- Henry J. Lawson, chief of the Pensacola, Fla., Tower, from the Mobile, Ala., Tower.

- Virgil B. Scalf, team supervisor at the Orlando, Fla., Tower, from the Raleigh, N.C., Tower.

- John M. Sexton, assistant chief at the Balboa, Canal Zone, ARTCC.

- Robert W. Shane, team supervisor at the San Juan, P.R., Center/RAPCON.

- Calvin C. Starkey, team supervisor at the Miami Tower.

## Southwest Region

- Kenneth O. Duckett, chief of the Deming, N.M., AF Sector Field Office of the El Paso, Tex., AF Sector, from the Maintenance Operations Branch.

- John L. Mizell, team supervisor at the Tulsa, Okla., Tower.

- Donovan D. Schardt, deputy chief of the Houston, Tex., Tower, from the En Route/Terminal Branch in headquarters.

- Susan J. Spencer, team supervisor at the Beaumont, Tex., Tower, from the Corpus Christi, Tex., Tower.

## Technical Center

- Rodney C. Guishard, chief of the Technical Analysis Branch, Engineering Management Staff.

## Western Region

- Elmer R. Byrd, chief of the San Pedro, Calif., Airway Facilities Sector Field Office of the Long Beach, Calif., AF Sector, from the FAA Academy.

- Peter V. Carey, team supervisor at the Orange County Tower in Santa Ana, Calif., from the Coast TRACON-El Toro MCAS in Santa Ana.

- Marvin D. Clark, assistant chief at the Tucson, Ariz., Flight Service Station, from the Prescott, Ariz., FSS.

- Wilmer M. Cope, Jr., chief of the Fresno, Calif., Tower, from the Airspace and Procedures Branch, Air Traffic Division.

- Arthur H. Corwin, team supervisor at the McClellan AFB, Calif., RAPCON, from the Phoenix, Ariz., Tower.

- Marion C. Davis, chief of the Coast TRACON-El Toro MCAS, from the Miramar Naval Air Station RATCC, San Diego, Calif.

- John J. Faletti, assistant manager of the San Diego, Calif., AF Sector.

- George T. Feick II, chief of the Tahoe Valley, Calif., Tower, from the Reno, Nev., Tower.

- Jimmie L. Haralson, chief of the Ukiah, Calif., FSS, from the Douglas, Ariz., FSS.

- Jimmie L. Jones, team supervisor at the Los Angeles ARTCC, from the Edwards AFB, Calif., RAPCON.

- Roger A. Necochea, team supervisor at the Brown Field Tower, San Diego, Calif., from the San Diego Tower.

- Charles A. Register, team supervisor at the El Monte, Calif., Tower, from the Coast TRACON-El Toro MCAS.

- Herman W. Schloo, Jr., chief of the Fresno-Chandler Tower, Calif., from the Palo Alto, Calif., Tower.

- R. Keith Shippee, assistant chief at the Ukiah, Calif., FSS.

- Erwin F. Stanicek, chief of the San Diego FSS, from the Plans and Programs Branch, Air Traffic Division.

- Harry K. Vanvleck, team supervisor at the Sacramento, Calif., FSS, from the Imperial, Calif., FSS.

- Kenneth G. Yocom, chief of the Long Beach, Calif., Tower, from the Torrance, Calif., Tower.

# Air Marking, 1980s Style

## FAA To Make G.A. Airports Easier To Find

It's easy to spot a paved runway from the air, but when a general-aviation pilot is searching for a grass landing strip, that's often another story.

Turf or unpaved airports usually blend in so well with the countryside that unless there are parked aircraft or unique airport structures, finding these airports, which comprise more than 60 percent of the nation's landing facilities, can be very difficult.

The FAA Technical Center may have found a solution that will cost an airport only about \$2,500.

The Airport Technology Division has been looking at the problem for some time at the request of New Jersey's Division of Aeronautics, evaluating approaches at an experimental turf runway at the Tech Center's airport. The effort has now led to operational tests of a low-cost marking and lighting system for unpaved runways at Twin Pine Airport near Trenton and Pleasant Valley Airport near Allentown/Bethlehem, Pa., and elsewhere.

The objective of the study was not only to develop the low-cost system to meet New Jersey safety requirements but also to develop a common system for all small unpaved airports to eliminate confusion for pilots flying interstate. For this purpose, the Center sent questionnaires to each state and organized an advisory group of officials from New Jersey, Maryland, Delaware, Pennsylvania and various general-aviation organizations.

At the top of the list of requirements was a pilot's ability to locate an airport. Others were airport identification, runway selection, circling guidance, final approach guidance, touchdown and rollout guidance and runway exit identification and taxiing procedures.



But for the new airport identifier in the center of the photo, a pilot approaching from this direction wouldn't know that he was nearing the Pleasant Valley Airport near Allentown, Pa. Photo by Mike Benson



Aligned with the runway by the airport identifier's markers, a general aviation pilot comes in for a landing aiming for the POMOLA that appears as a single panel opposite the identifier.



The identifier pyramid, bearing the airport's initials and altitude, is topped with a windsock and floodlights. The markers indicate runway headings of 18 and 36, with the farthest left one bearing a red mark for a displaced threshold.

Included among the Center's evaluations were color, size, visibility and costs, and the materials included airplane tires, buckets, plastic sheets and cones. It turned out that using adjacent black and white panels on runway markers gave the best visibility against any background—on snow, facing into the sun and facing away from the sun.

A black and white locator in the shape of a pyramid was finally selected as best, being distinct from other markings in the airport area and providing a site for mounting a windsock. The pyramid also offers a place for the airport's identification letters.

Three white runway alignment markers on two sides of the pyramid identify the direction of the runway. If the runway is closed, a black "X" is painted on the

center marker, and the end of the outer marker is painted red to warn of a displaced threshold. Runway markers that show the threshold are a standard green, and runway end markers are red. There are aiming point markers, go-around markers and black and white runway edge markers.

Final approach guidance is provided by using a simplified Visual Approach Slope Indicator (VASI) dubbed a POMOLA (Poor Man's Optical Landing Aid). It consists of two elevated plywood panels in front and one lower panel to the rear and between, all painted fluorescent orange. A pilot on the proper glide slope would see the panels aligned.

For night operations, the locator pyramid is floodlighted. There are six green threshold lights and six red ones at the opposite end. Eight white lights mark the aiming point, or glidepath intercept. Two elevated amber lights in combination with the aiming point lights make up the nighttime equivalent of the POMOLA, which is called the Cumming-Lane guidance system. Retroreflectors are on all the markers, bouncing the plane's landing lights out to a quarter-mile from the threshold.

The \$2,500 figure is for a 2,800-foot runway, with a little less than half representing the daytime equipment, the balance the night lights.

The demonstrations at the three airports will be for a year, and airport operators will be asked to issue questionnaires to using pilots to get their reactions.

Eight thousand airports will be awaiting the results. ■

# THE FAA APPROVED SANTA:



By Beck for the Fort Wayne Journal-Gazette

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

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